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Sonwane Ravi B.

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E. NANU

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Preface

This edition of the "Competition Winner" for Veterinary and Animal Sciences students is an exhaustive compilation of questions in various objective type formats. The questions have been placed subject wise along with answers at the end of each section. A comprehensive question bank of this kind was a long felt need as far as the students of Veterinary and Animal Sciences were concerned. It will go a long way in equipping our students to stand the test of various competitive examinations like the UPSC, ARS, state PSC, NET and Postgraduate admission and will help to brush up critical areas in the subject. I believe the book will be of immense use to the Undergraduate students as it has been prepared keeping in mind the Veterinary Council of India Undergraduate curriculum. It will also be of help to teachers and question paper setters in the field of Veterinary and Animal Sciences. Care has been taken during the preparation to cover all possible areas in the concerned subject. It is a request that errors and inconsistencies if any be brought to the notice.

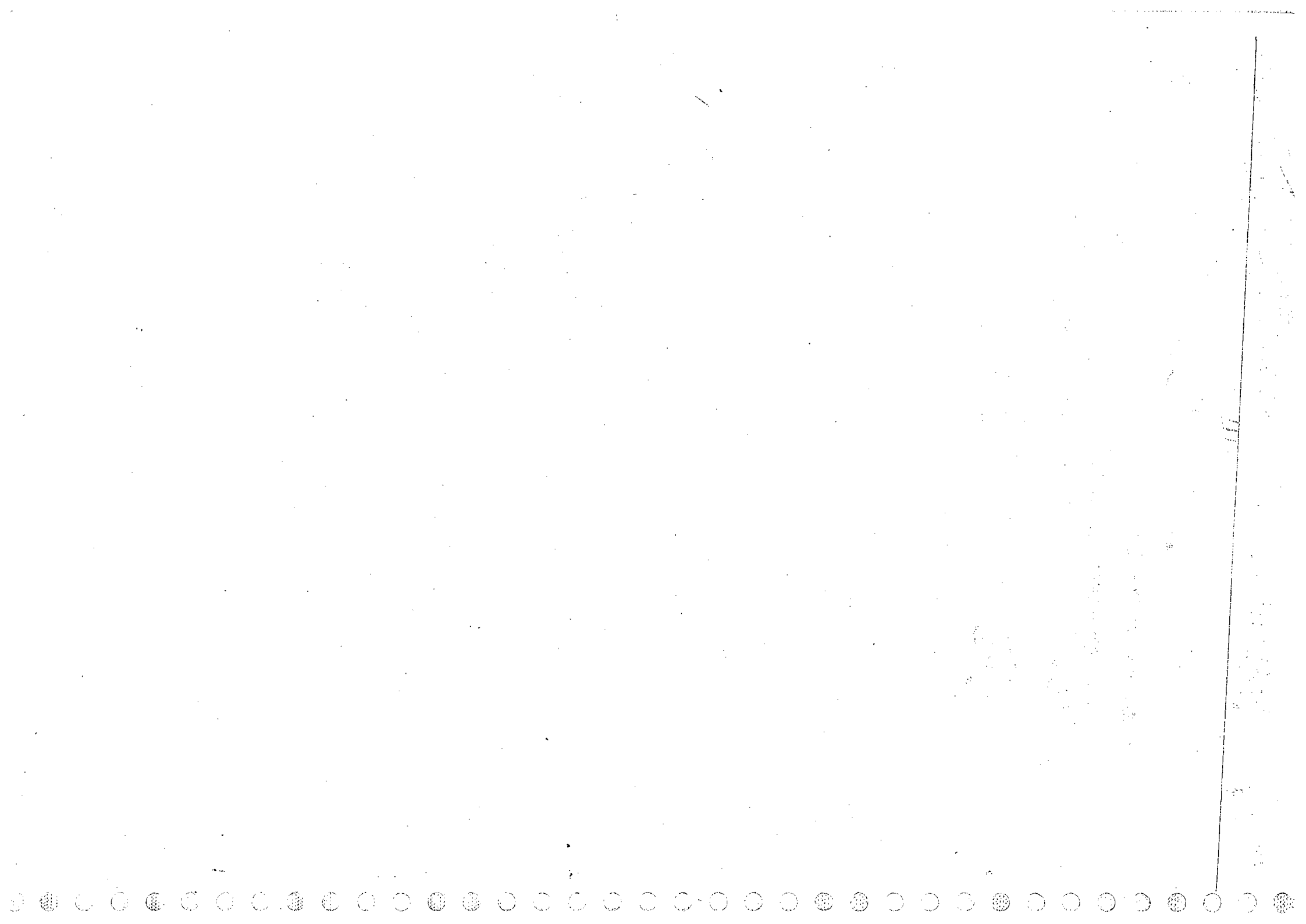
The inputs provided by the Heads of Department of the Faculty of Veterinary and Animal Sciences in revising the manuscript are gratefully acknowledged. The time and energy spent by Dr. K. M. Lucy and Dr. S. Maya in editing the book and Smt. S. Akhileswari in meticulous typing of the manuscript is laudable.

I hope that this edition will be of use for those in the Veterinary profession.

E. NANU

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CHAPTER 1
VETERINARY ANATOMY

I. Choose the correct answer:

1. The only cranial nerve emerging from the dorsal aspect of the brain is
   a) Oculomotor
   b) Facial
   c) Trochlear
   d) Optic

2. The fold of duramater covering hypophysis cerebri is
   a) Diaphragma sellae
   b) Tentorium cerebelli
   c) Falx cerebri
   d) Linea splendens

3. The ventral buccal nerve is the branch of
   a) Maxillary
   b) Opthalmic
   c) Facial
   d) Mandibular

4. The extensors of the leg are innervated by
   a) Tibial
   b) Peroneal nerve
   c) Femoral nerve
   d) Saphenous nerve

5. The largest nerve in the brachial plexus is
   a) Radial
   b) Median
   c) Ulnar
   d) Suprascapular

6. Posterior vena cava is partly embedded in the organ along part of its course.
   a) Spleen
   b) Liver
   c) Kidney
   d) Uterus

7. The largest terminal branch of the internal maxillary artery is
   a) Malar
   b) Sphenopalatine
   c) Infraorbital
   d) Greater palatine

8. There are three musculi papillaris in
   a) Right atrium
   b) Right ventricle
   c) Left atrium
   d) Left ventricle

9. The lingual artery is the branch of
   a) Internal maxillary artery
   b) External maxillary artery
   c) External carotid
   d) None of the above

10. The continuation of the femoral artery is
   a) Saphenous
   b) Popliteal
   c) Anterior tibial
   d) Posterior tibial

11. The tapetum is absent in
   a) Cattle
   b) Cat
   c) Horse
   d) Pig

12. Which of the following is the auditory ossicle of fowl
a) Malleus
b) Stapes
c) Incus
d) Columella

13. An impermeable junction between cells is called
a) Zonula adherens
b) Zonula occludens
c) Macula adherens
d) None of the above

14. Merkel cell is found in
a) Trachea
b) Stomach
c) Skin
d) Lymph node

15. The lining epithelium of trachea is
a) Pseudo-stratified ciliated columnar
b) Transitional epithelium
c) Ciliated columnar epithelium
d) None of the above

16. Malphigian corpuscles are found in
a) Kidney
b) Liver
c) Lung
d) Ovary

17. Mammalian egg is an example for
a) Microlecithal egg
b) Mesolecithal egg
c) Macrolecithal egg
d) None of the above

18. Inner cell mass is seen in the development of a
a) Mammal
b) Bird
c) Amphioxus
d) None of the above

19. Zonary type of placenta is seen in
a) Cow
b) Sheep
c) Dog
d) None of the above

20. Kupffer cells are found in
a) Liver
b) Duodenum
c) Bronchus
d) Lung

21. Cell nests are found in
a) Bone
b) White fibrocartilage
c) Hyaline cartilage
d) None of the above

22. Schwann cells are found associated with
a) Neurons
b) Cardiac fibres
c) Skeletal fibres
d) None of the above

23. The receptor for cold is
a) Meissner's corpuscle
b) Krause's end bulb
c) Pacinian corpuscles
d) Muscle spindle

24. Zymogen granules are found in
a) Hepatocytes
b) Pancreatic acinar cells
c) Tanycytes
d) Ependyma

25. Peyer's patches are found in
a) Ileum
b) Duodenum
c) Colon
d) Caecum

26. Podocytes are found on
a) Visceral layer of Bowman's capsule
b) Parietal layer of Bowman's capsule
c) Glomerular capillaries
d) None of the above

27. Macula densa is found in
a) Proximal convoluted tubule
b) Distal straight tubule
c) Afferent arteriole
d) Collecting tubule

28. The wall of respiratory bronchiole is lined by
a) Cuboidal cells
b) Ciliated columnar cells
c) Squamous cells
d) None of the above

29. The urinary bladder is lined by
a) Stratified squamous epithelium
b) Stratified columnar epithelium
c) Transitional epithelium
d) Simple squamous epithelium

30. Lingual tonsil is present in the tongue of
a) Pig
b) Sheep
c) Goat
d) Ox

31. Central nervous system is derived from
a) Ectoderm
b) Endoderm
c) Mesoderm
d) None of the above

32. The smallest blunt projection on the surface of the bone is known as
a) Tuberosity
b) Tubercle
c) Trochanter
d) Ridge

33. The olecranon process is grooved in
a) Ox
b) Horse
c) Dog
d) Fowl

34. The radial and intermediate carpals are fused in
a) Dog
b) Ox
c) Horse
d) Fowl

35. In ox, the large metacarpal refers to the fused
a) 1^{st} & 2^{nd}
b) 2^{nd} & 3^{rd}
c) 3^{rd} & 4^{th}
d) 4^{th} & 5^{th}

36. The lesser sciatic notch is absent in
a) Ox
b) Horse
c) Dog
d) Pig

37. The trochanter tertius is present in the femur of
a) Fowl
b) Horse
c) Ox
d) Dog

38. The anterior tuberosity of tibia is grooved in
a) Ox
b) Horse
c) Dog
d) Pig

39. Fibula extends the whole length of the tibia in
a) Ox
b) Fowl
c) Dog
d) Horse

40. The thirteenth pair of ribs are floating ribs in
a) Sheep
b) Dog
c) Horse
d) Fowl

41. The transverse process of sixth cervical vertebrae is trifid in
a) Ox
b) Horse
c) Dog
d) Fowl

42. The insertion of deltoideus is to the
a) Scapula
b) Radius
c) Humerus
d) Ulna

43. Corocoid process is absent in the scapula of
a) Dog
b) Fowl
c) Ox
d) Horse

44. The smallest head of deep digital flexor in forelimb of ox is
a) Humeral head
b) Radial head
c) Ulnar head
d) Ulnaris lateralis

45. The movement of the limb away from the median plane
a) Abduction
b) Flexion
c) Adduction
d) Extension

46. Slight degree of movement without a joint cavity is permitted in the
a) Synarthrodial joints
b) Amphiarthrodial joints
c) Diarthrodial joints
d) Symphysis

47. The lateral small metatarsal of horse refers to the
a) Second
b) Third
c) Fourth
d) Fifth

48. Buttons are small nodule like distal extremity in the
a) Ribs
b) Ulna
c) Radius
d) Splints

49. Fabella is found in
a) Dog
b) Horse
c) Ox
d) Fowl

50. Foramen transversarium is absent in the following vertebra
a) Axis
b) 3rd cervical
c) 4th cervical
d) 7th cervical

51. Poupart's ligament is the ligament of
a) Obliquus abdominis externus
b) Obliquus abdominis internus
c) Rectus abdominis
d) Transverse abdominis

52. The epithelium lining the body cavity is called as
a) Mesothelium
b) Urothelium
c) Endothelium
d) Myothelium

53. Agranular leukocyte of the blood is
a) Eosinophil
b) Neutrophil
c) Monocyte
d) Basophil

54. Branching and anastamosing of fibres are seen in
a) Cardiac muscle
b) Striated muscle
c) Smooth muscle
d) None of the above

55. Which of the following papillae possess taste buds
a) Filliform
b) Conical
c) Circumvallate
d) All the above

56. Neuroepithelial areas seen in the semicircular canals
a) Organ of Corti
b) Cristae ampullares
c) Macula utriculi
d) Macula sacculi

57. Islets of Langerhans consists of
a) Alpha cells
b) Beta cells
c) Delta cells
d) All the above

58. In oesophagus the mucous glands are situated in the
a) Mucosa
b) Submucosa
c) Muscularis
d) Serosa

59. Rathke's pouch is the primordium associated the development of
a) Tongue
b) Tooth
c) Pituitary gland
d) Stomach

60. Dentine of teeth is derived from
a) Ameloblast
b) Osteoblast
c) Odontoblast
d) Fibroblast

61. Period of embryo in ox includes
a) First 14 days of intra uterine life
b) First 7 days of intra uterine life
c) Second to eighth week of intra uterine life
d) Eighth week to end of gestation

62. Myoepithelial cells are absent around the secretory units of
a) Mammary gland
b) Pancreas
c) Submaxillarygland
d) Sublingual gland

63. The cell that is not seen in the seminiferous tubule
a) Sertoli cells
b) Leydig cells
c) Spermatogonia
d) None of the above

64. The encapsulated nerve endings concerned with the discriminative touch are
a) Krause's end bulb
b) Pacinian corpuscle
c) Meissner's corpuscle
d) Muscle tendon spindle

65. Which of the following lines brain ventricles.
a) Astrocyte
b) Ependyma
c) Schwann cell
d) Oligodendrocyte

66. Simple squamous epithelium lining the blood vessels is
a) Epicardium
b) Mesothelium
c) Endocardium
d) Endothelium

67. Which of the following cranial nerve is sensory
a) Optic
b) Trochlear
c) Trigeminal
d) Facial

68. Taste buds are absent in
a) Filiform
b) Fungiform
c) Foliate
d) Circumvallate

69. Photoreceptors are present in
a) Cornea
b) Sclera
c) Choroid
d) Retina

70. Muscularis mucosa is absent in
a) Rumen
b) Abomasum
c) Ileum
d) Duodenum

71. Rostral wall of cranial cavity is formed by
a) Nasal bone
b) Occipital bone
c) Ethmoid bone
d) Sphenoid bone

72. Unpaired cranial bone
a) Frontal
b) Temporal
c) Occipital
d) Parietal

73. The nerve plexus present between the inter muscular connective tissue of intestine is
a) Heller's plexus
b) Auerbach's plexus
c) Meissner's plexus
d) Pampiniform plexus

74. Large intestine is characterized by the
a) Absence of villi, crypts of Lieberkuhn and very less numbers of goblet cells
b) Presence of villi, crypts of Lieberkuhn and numerous goblet cells
c) Absence of villi, crypts of Lieberkuhn and numerous goblet cells
d) None of the above

75. Mesenteric lymph nodes are located near the root of mesentery in
a) Sheep
b) Horse
c) Cattle
d) None of these

76. Centroacinar cells of Langerhan's are seen in
a) Parotid gland
b) Pancreas
c) Liver
d) Lung

77. Oyster shell shaped spleen is characteristic of
a) Dog
b) Cattle
c) Goat
d) Horse

78. Connective tissue surrounding each skeletal muscle fiber is
a) Epimysium
b) Endomysium
c) Perimysium
d) Endoneurium

79. Which is not a part of reticulo-endothelial system
a) Macrophages
b) Kupffer cells
c) Lymphocytes
d) All the above

80. Gastrulation in mammal is by
a) Invagination
b) Involution
c) Delamination
d) None of the above

81. The wall of the allantois is made up of
a) Externally somatic ectoderm and internally mesoderm
b) Externally splanchnic mesoderm and internally ectoderm
c) Externally splanchnic mesoderm and internally entoderm
d) None of the above

82. The characteristics of cardiac muscle fibres are
a) Striated, voluntary and have intercalated discs
b) Non-striated, voluntary and have intercalated discs
c) Striated, involuntary and intercalated discs
d) Striated, involuntary and do not have intercalated discs

83. Juxta-glomerular cells are present in
a) Proximal convoluted tubule
b) Distal convoluted tubule
c) Afferent arteriole
d) Efferent arteriole

84. The nucleated RBCs are present in
a) Rat
b) Bat
c) Parrot
d) Cat

85. Diverticulum duodeni is present in
a) Pig
b) Cattle
c) Dog
d) Horse

86. Which of the following is not present in the portal triad
a) Hepatic artery
b) Portal vein
c) Hepatic duct
d) Hepatic vein

87. Hypophysis cerebri is separated from base of the brain by
a) Falx cerebri
b) Diaphragma sellae
c) Tentorium cerebelli
d) Brachium pontis

88. The lining epithelium of the vagina is
a) Simple squamous
b) Trasnsitional
c) Stratified squamous
d) Columnar

89. The characteristic features of the veins are
a) Less diameter, thick walls and absence of valves
b) Large diameter, thin walls and absence of valves
c) Large diameter, thick walls and presence of valves
d) Large diameter, thin walls and presence of valves

90. Tendon of insertion of rectus abdominis muscle is
a) Poupart's lig.
b) Linea alba
c) Prepubic tendon
d) Tendo-achillis

91. Insulin is secreted by
a) Alpha cells
b) Beta cells
c) Delta cells
d) Pancreatic acinar cells

92. "Side-kick" in horse is restricted by
a) Round lig.
b) Pubo-femoral lig.
c) Sesamoidean lig.
d) Cruciate lig.

93. Time of ovulation in cow is
a) 14 hours after the end of oestrus
b) 11 hours before oestrus
c) 24 hours before oestrus
d) 36-48 hours after oestrus

94. Atlanto-occipital joint is a
a) Pivot joint
b) Hinge joint
c) Ellipsoidal joint
d) Fibrous joint

95. Syndesmochorial placenta is noticed in
a) Mare
b) Cow
c) Bitch
d) Sow

96. The lining epithelium of the trachea is
a) Stratified squamous
b) Columnar
c) Pseudo stratified ciliated columnar
d) Transitional epithelium

97. Type of placenta in canines is
a) Diffuse
b) Zonary
c) Cotyledonary
d) Discoid

98. Uterus develops from
a) Wolffian duct
b) Mullerian duct
c) Gartner's canal
d) Genital tubercle

99. Cells associated with photopic vision are
a) Rods
b) Cones
c) Amacrine cells
d) None of these

100. In the cock, spur core is seen on
a) Tibiotarsus
b) Humerus
c) Tarsometatarsus
d) Femur

101. Number of lumbar vertebrae in dog
a) 6
b) 7
c) 8
d) 9

102. For the correction of the subluxation of patella, which of the following ligament is cut?
a) Medial patellar ligament
b) Middle patellar ligament
c) Lateral patellar ligament
d) All the above

103. Atlanto-axial joint is an example of
a) Trochoid
b) Gomphosis
c) Hinge joint
d) None of the above

104. Angular process of mandible is seen in
a) Ox
b) Pig
c) Horse
d) Dog

105. Pin bone is
a) Fibula
b) Tuber coxae
c) Tuber ischii
d) Calcaneal tuber

106. Extensor process is present in
a) 1st phalanx
b) 2nd phalanx
c) 3rd phalanx
d) None of the above

107. Cruciate ligaments are present in
a) Hip joint
b) Stifle joint
c) Hock joint
d) Shoulder joint

108. Hypocleidium is associated with
a) Scapula
b) Coracoid
c) Clavicle
d) None of the above

109. Cnemial crest is a part of
a) Tibiotarsus
b) Tarsometatarsus
c) Humerus
d) Femur

110. Number of cervical vertebrae in fowl is
a) 7
b) 10
c) 12
d) 14

111. One of the following veins does not pour in to the right atrium
a) Vena cava
b) Vena hemiazygos
c) Coronary vein
d) Pulmonary vein

112. The paired branch of abdominal aorta
a) Coeliac
b) Cranial mesenteric
c) Testicular
d) Caudal mesenteric

113. The laryngeal muscle that is not supplied by the recurrent laryngeal nerve
a) Cricothyroideus
b) Cricoarytenoideus
c) Thyroarytenoideus
d) Arytenoideus transversus

114. Vagus nerve emerges out of the cranial cavity through
a) Hypoglossal foramen
b) Jugular foramen
c) Foramen ovale
d) Foramen orbitorotundum

115. The nerve that innervates extensors of carpus and digits
a) Median
b) Ulnar
c) Radial
d) Axillary

116. One of the following is not an intrinsic muscle of eyeball
a) Inferior oblique
b) Ciliary muscle
c) Constrictor pupillae
d) Dialator pupillae

117. Shortest cranial nerve
a) Olfactory
b) Optic
c) Trochlear
d) Vestibulocochlear

118. Number of ribs present in equines:
a) 18 pairs
b) 13 pairs
c) 14 pairs
d) 7 pairs

119. One of the following is not a collateral branch of brachial artery
a) Deep brachial
b) Transverse cubital
c) Deep cervical
d) Collateral ulnar

120. One of the following is not a part of mesencephalon
a) Tectum
b) Tegmentum
c) Hippocampus
d) Crura cerebri

121. Which of the following forms the roof of fourth ventricle
a) Vermis of cerebellum
b) Rostral medullary velum
c) Caudal medullary velum
d) All the above

122. An example for projection fibres
a) Corpus callosum
b) Cingulum
c) Corticospinal tract
d) None of the above

123. Os phrenic is present in
a) Cattle
b) Horse
c) Camel
d) Sheep

124. Which of the following eye muscle is absent in birds
a) Dorsal rectus
b) Superior oblique
c) Lateral rectus
d) Retractor bulbi

125. Which of the following is not a component of basal nuclei
a) Caudate nucleus
b) Claustrum
c) Red nucleus
d) Amygdaloid body

126. Largest venous trunk in the body
a) Cranial vena cava
b) Caudal vena cava
c) Jugular vein
d) Pulmonary vein

127. Longest segment of small intestine
a) Duodenum
b) Jejunum
c) Ileum
d) Colon

128. Comma-shaped caecum is present in
a) Ox
b) Horse
c) Dog
d) Pig

129. Neuroepithelial areas seen in the semicircular canals
a) Organ of Corti
b) Cristae ampullares
c) Macula utriculi
d) Macula sacculi

130. Argyrophilic fibres are
a) Collagen fibres
b) Elastic fibres
c) Reticular fibres
d) None of the above

131. The phagocytic cells found in the sinusoids of liver is called
a) Mast cell
b) Kupffer cell
c) Plasma cell
d) Granulocyte

132. The lingual papilla without taste buds are
a) Fungiform
b) Lenticular
c) Foliate
d) Vallate

133. Paneth cells are present in
a) Cardiac glands
b) Fundic glands
c) Pyloric glands
d) Intestinal glands

134. Goblet cells will be maximum in
a) Duodenum
b) Rectum
c) Ileum
d) Jejunum

135. Most numerous cells of pancreatic islets
a) Alpha cells
b) Beta cells
c) C cells
d) Delta cells

136. According to development of cone of the teeth, the dentition of ox is
a) Bunodont
b) Secodont
c) Selenodont
d) Lophodont

137. Ovarian follicles are seen in the centre in
a) Ox
b) Horse
c) Dog
d) Pig

138. Corpora amylacea is a microscopic feature of
a) Testis
b) Ovary
c) Mammary gland
d) Pineal gland

139. Carbohydrates are commonly demonstrated by
a) Orcein
b) PAS
c) Weigert's
d) H&E

140. Largest blood cell is
a) Lymphocyte
b) Neutrophil
c) Monocyte
d) Basophil

141. The glial cell that lays myelin sheath in CNS is
a) Neurolemmocyte
b) Astrocyte
c) Oligodendrocyte
d) Microglia

142. Largest nerve in the body
a) Radial nerve
b) Trigeminal nerve
c) Vagus nerve
d) Ishiatic nerve

143. Largest ear ossicle is
a) Malleus
b) Incus
c) Os lenticulare
d) Stapes

144. Extension of pia mater beyond the caudal end of spinal cord
a) Conus medullares
b) Coccygeal ligament
c) Filum terminale
d) Impar ganglion

145. Viborg's triangle is the preferred site for surgical treatment in
a) Empyema of guttereal pouch
b) Persistent salivary fistula
c) Rumenotomy
d) Biopsy of liver

146. Stifle joint includes
a) Femorotibial articulation
b) Femoropatellar articulation
c) Menisci
d) All the above

147. Stongest ligament among the following is
a) Medial patellar ligament
b) Lateral patellar ligament
c) Middle patellar ligament
d) Femoropatellar ligament

148. 'Dropped jaw' is the symptom exhibited in
a) Bilateral mandibular n. paralysis
b) Bilateral facial n. paralysis
c) Unilateral mandibular n. paralysis
d) Unilateral facial n. paralysis

149. 'Stupid look' is the symptom exhibited in
a) Bilateral mandibular n. paralysis
b) Bilateral facial n. paralysis
c) Unilateral mandibular n. paralysis
d) Unilateral facial n. paralysis

150. After distocia, the animal may show difficulty to stand up due to
a) Obturator nerve paralysis
b) Ishiatic nerve paralysis
c) Fibular nerve paralysis
d) Tibial nerve paralysis

151. A hands bredth above the point of hock on medial aspect is the site for
a) Tibial nerve block
b) Fibular nerve block
c) Patellar desmotomy
d) None of the above

152. Two inches below and behind the lateral tuberosity of the tibia is the site for
a) Tibial nerve block
b) Fibular nerve block
c) Patellar desmotomy
d) None of the above

153. Four inches above the accessory carpal along a line joining the point of elbow with accessory carpal is the site for
a) Ulnar nerve block
b) Median nerve block
c) Radial nerve block
d) Blocking the brachial plexus

154. A point below the medial tuberosity of radius is the site for
a) Ulnar nerve block
b) Median nerve block
c) Radial nerve block
d) Blocking the brachial plexus

155. The nerve block done to anaesthetize penis in bull
a) Pudendal nerve block
b) Tibial nerve block
c) Fibular nerve block
d) Blocking the lumbar plexus

156. The lymph node located ventral to temporomandibular joint caudal to masseter partly covered by parotid salivary gland is
a) Parotid lymph node
b) Mandibular lymph node
c) Deep cervical lymph node
d) Retropharyngeal lymph node

157. The lymph node situated between sternocephalicus and mandibular salivary gland is
a) Parotid lymph node
b) Mandibular lymph node
c) Deep cervical lymph node
d) Retropharyngeal lymph node

158. The lymph node located at the cranial border of the supraspinatus muscle is
a) Parotid lymph node
b) Mandibular lymph node
c) Deep cervical lymph node
d) Superficial cervical lymph node

159. The lymph node located in front of the cranial border of tensor fascia latae muscle is
a) Prefemoral lymph node
b) Paralumbar lymph node
c) Tuberal lymph node
d) Popliteal lymph node

160. The lymph node located in a mass of fat on the gastrocnemius muscle is
a) Prefemoral lymph node
b) Paralumbar lymph node
c) Tuberal lymph node
d) Popliteal lymph node

161. The vein which drains the mammary gland is
a) Internal thoracic
b) External pudendal
c) Internal pudendal
d) All the above

162. Horns of the uterus resemble intestinal coils in
a) Sow
b) Mare
c) Bitch
d) Cow

163. Horns diverge from the body of the uterus in a V- shaped manner in
a) Sow
b) Mare
c) Bitch
d) Cow

164. The non-glandular projections of endometrium which forms placentome is
a) Caruncles
b) Cotyledons
c) Corpus luteum
d) Corpus albicans

165. The ovulation fossa is seen in
a) Sow
b) Mare
c) Bitch
d) Cow

166. Location of ovaries in non-pregnant bitch is
a) Sublumbar
b) At pelvic inlet
c) Intrapelvic
d) Abdominal floor

167. Location of ovaries in non-pregnant cow is
a) Sublumbar
b) At pelvic inlet
c) Intrapelvic
d) Abdominal floor

168. The structure which is not included in the spermatic cord is
a) Internal cremaster muscle
b) External cremaster muscle
c) Vas deferens
d) Tunica vaginalis

169. Fascia which forms a layer of scrotum is
a) Intercolumnar fascia
b) Infundibuliform fascia
c) Cremasteric fascia
d) All the above

170. Intercolumnar fascia is derived from
a) Oliquus abdominis externus
b) Oliquus abdominis internus
c) Cremaster externus
d) Transversus abdominis

171. Infundibuliform fascia is derived from
a) Oliquus abdominis externus
b) Oliquus abdominis internus
c) Cremaster externus
d) Transversus abdominis

172. Cremasteric fascia is derived from
a) Oliquus abdominis externus
b) Oliquus abdominis internus
c) External intercostals
d) Transversus abdominis

173. The position of attached/ epididymial border in ox is
a) Caudal
b) Cranial
c) Superior
d) Inferior

174. The position of attached/ epididymial border in stallion is
a) Caudal
b) Inferior
c) Superior
d) None of the above

175. The position of attached/ epididymial border in dog is
a) Caudal
b) Inferior
c) Superior
d) None of the above

176. Testicular vein forms a rich network which surrounds the coils of testicular artery as
a) Caudal plexus
b) Testicular plexus
c) Pampiniform plexus
d) None of the above

177. Kidneys in goat can be identified by
a) Bean-shape
b) Renal crest
c) Stellate veins at hilus
d) All the above

178. Renal pelvis is absent in
a) Horse
b) Ox
c) Pig
d) Dog

179. 'Sweeny' is due to the paralysis of
a) Suprascapular nerve
b) Radial nerve
c) Median nerve
d) Ulnar nerve

180. 'Dropped elbow' occur due to the paralysis of
a) Suprascapular nerve
b) Radial nerve
c) Median nerve
d) Ulnar nerve

181. Scythe shaped spleen is seen in
a) Horse
b) Ox
c) Pig
d) Dog

182. Left eleventh intercostal space during expiration is preferred for biopsy of
a) Liver
b) Spleen
c) Intestines
d) Pancreas

183. Gall bladder is absent in
a) Horse
b) Elephant
c) Camel
d) All the above

184. Papillary process is absent in the liver of
a) Goat
b) Ox
c) Pig
d) Dog

185. Female calf born co-twin to a bull calf
a) Monozygotic twin
b) Identical twin
c) Freemartin
d) All the above

186. Pituitary gland is attached to
a) Mesencephalon
b) Diencephalon
c) Metencephalon
d) Myelencephalon

187. Optic nerves and retina are derived from
a) Forebrain
b) Midbrain
c) Hindbrain
d) Ectoderm of the head

188. Which of the following has a double origin
a) Adrenal
b) Teeth
c) Skin
d) All the above

189. Cortex of suprarenal glands are derived from
a) Ectoderm
b) Mesoderm
c) Entoderm
d) All the above

190. A group of large, multinucleate giant cells which cause the resorption of bones
a) Osteocytes
b) Ostoblasts
c) Osteoclasts
d) Chondrocytes

191. Urethra opening on the upper surface of penis is
a) Hypospadias
b) Epispadias
c) Stenosis
d) Urorectal fistula

192. The first site of blood formation is
a) Cardiogenic plate
b) Area vasculosa
c) Aortic sac
d) Aortic arches

193. Umbilical vein transforms into
a) Ligamentum arteriosum
b) Ligamentum venosum
c) Lateral ligaments of bladder
d) Ligamentum teres of liver

194. Fusion of two metanephric primordia results in
a) Horse shoe kidney
b) Cystic kidney
c) Pelvic kidney
d) Double ureter

195. Ulna of horse is an example for
a) Elongated long bone
b) Short bone
c) Aborted long bone
d) Pneumatic bone

196. External angle of ilium is known as
a) Point of croup
b) Point of hip
c) Point of buttock
d) Point of hock

197. Largest foramen in the body is
a) Foramen Munro
b) Foramen magnum
c) Jugular foramen
d) Obturator foramen

198. Trochanter tertius is present in the
a) Humerus of horse
b) Femur of dog
c) Humerus of pig
d) Femur of horse

199. Foramen triosseum is present in
a) Aves
b) Canines
c) Porcine
d) Equines

200. An unpaired cranial bone is
a) Temporal
b) Parietal
c) Sphenoid
d) Frontal

201. Largest paranasal sinus in cattle is
a) Frontal sinus
b) Maxillary sinus
c) Palatine sinus
d) Sphenoidal sinus

202. Radius and Ulna are not fused in
a) Ox
b) Dog
c) Horse
d) None of the above

203. Metacromion process is present in the scapula of
a) Pig
b) Fowl
c) Dog
d) Rabbit

204. An example for ginglymus joint is
a) Hip joint
b) Elbow joint
c) Atlanto-axial joint
d) Shoulder joint

205. Cruciate ligament is present in
a) Stifle joint
b) Elbow joint
c) Hock joint
d) Inter phalangeal joint

206. Eustachean tube connects pharynx with
a) External ear
b) Middle ear
c) Internal ear
d) Cranial cavity

207. Decreasing the angle between two bones is
a) Circumduction
b) Adduction
c) Flexion
d) Abduction

208. Lateral malleolus is the
a) Distal extremity of fibula
b) Proximal extremity of ulna
c) Distal extremity of tibiotarsus
d) Distal extremity of tibia

209. Union of skeletal parts by means of muscles is
a) Synchondrosis
b) Symphysis
c) Synarthrosis
d) Synsarcosis

210. Partially movable joint is
a) Amphiarthrosis
b) Diarthrosis
c) Synarthrosis
d) Symphysis

211. Muscle having two bellies with an intervening tendon is
a) Buccinator
b) Digastricus
c) Masseter
d) Zygomaticus

212. Muscle that provides acceleration motion to a joint is
a) Shunt muscle
b) Cruciate muscle
c) Spurt muscle
d) Spiral muscle

213. Example for an unpaired muscle is
a) Depressor labii maxillaris
b) Rectus abdominis
c) Diaphragm
d) Obturator externus

214. Most powerful extensor of thigh region is
a) Quadratus femoris
b) Quadratus lumborum
c) Biceps femoris
d) Quadriceps femoris

215. Which of the following is not a masticatory muscle
a) Masseter
b) Buccinator
c) Digastricus
d) Temporalis

216. Cremaster externus is a slip of
a) Obliquus abdominis externus
b) Transversus abdominis
c) Obliquus abdominis internus
d) Rectus abdominis

217. Which of the following is a muscle of forced expiration
a) Diaphragm
b) External intercostal muscle
c) Levatoris costarum
d) Internal intercostal muscle

218. Jugular groove is found between
a) Brachiocephalicus & Sternocephalicus
b) Sternocephalicus & Splenius
c) Sternocephalicus & Sternothyrohyoideus
d) Brachiocephalicus & Rhomboideus

219. Sickle shaped fold of dura mater separating two cerebral hemispheres is
a) Tentorium cerebelli
b) Falx cerebri
c) Diaphragma sellae
d) None of the above

220. Cavity of the telencephalon is
a) Lateral ventricles
b) Aqueduct of Sylvius
c) Third ventricle
d) Fourth ventricle

221. Largest nerve from the lumbo-sacral plexus is
a) Lateral cutaneous femoral nerve
b) Femoral nerve
c) Obturator nerve
d) Sciatic nerve

222. Chief nerve innervating the extensors of fore limb
a) Median nerve
b) Ulnar nerve
c) Radial nerve
d) Long thoracic nerve

223. Dental pad is seen in
a) Ox
b) Horse
c) Pig
d) Dog

224. Most widely distributed cranial nerve is
a) Trigeminal nerve
b) Vagus nerve
c) Facial nerve
d) Abducent nerve

225. Preganglionic fibres are longer in
a) Sympathetic nerves
b) Parasympathetic nerves
c) Cranial nerves
d) Spinal nerves

226. Two cerebral hemispheres are interconnected by
a) Corpus medullare
b) Corpus striatum
c) Corpus callosum
d) Corpora quadrigemina

227. Muscular ridges seen in the auricles are
a) Trabeculae carnae
b) Musculi pectinati
c) Musculi papillaris
d) Moderator band

228. Coronary sinus is the opening of
a) Great cardiac vein
b) Pulmonary veins
c) Cranial vena cava
d) Caudal vena cava

229. Which of the following is not a branch of subclavian artery
a) Superficial cervical artery
b) Internal thoracic artery
c) Common carotid artery
d) Costocervical trunk

230. An unpaired branch of abdominal aorta is
a) Renal artery
b) Coeliac artery
c) Internal iliac artery
d) External iliac artery

231. Largest lymph duct in the body is
a) Tracheal lymph duct
b) Right lymphatic duct
c) Thoracic duct
d) Visceral trunk

232. Preferred vein for giving intravenous injection in cattle is
a) Internal jugular vein
b) Cephalic vein
c) Saphenous vein
d) External jugular vein

233. "Milk vein" in cattle is
a) Caudal superficial epigastric vein
b) Internal pudental vein
c) Cranial superficial epigastric vein
d) Caudal mammary vein

234. Fremitus is felt in
a) Cranial uterine artery
b) Middle uterine artery
c) Caudal uterine artery
d) Urogenital artery

235. Right atrio-ventricular orifice is guarded by
a) Tricuspid valve
b) Bicuspid valve
c) Coronary valve
d) Semilunar valve

236. The first branch of aorta is
a) Brachiocephalic trunk
b) Common carotid artery
c) Pulmonary artery
d) Coronary artery

237. Inferior oblique muscle of the eye ball is innervated by
a) Trochlear nerve
b) Oculomotor nerve
c) Abducent nerve
d) Optic nerve

238. Tapetum is a part of
a) Nervous tunic
b) Fibrous tunic
c) Vascular tunic
d) None of the above

239. Part of retina containing the specialised neuroepithelium is
a) Pars iridica retinae
b) Pars optica retinae
c) Pars ciliaris retinae
d) Ora ciliaris retinae

240. Sensory epithelium of the auditory apparatus is
a) Crista ampullaris
b) Macula utricularis
c) Spiral Organ of Corti
d) Macula saccularis

241. Posterior chamber of the eye is occupied by
a) Lens
b) Aquous humor
c) Vitreous body
d) Iris

242. Glands that are seen in the eye lid are
a) Harderian gland
b) Lacrimal gland
c) Meibomian gland
d) All of the above

243. "Lyssa" is found in the tongue of
a) Dog
b) Cattle
c) Horse
d) Pig

244. Diverticulum ventriculi is seen in:
a) Horse
b) Pig
c) Dog
d) Cattle

245. An unpaired air sac seen in fowl is
a) Clavicular air sac
b) Cranial thoracic air sac
c) Caudal thoracic air sac
d) Abdominal air sac

246. The largest lobe in the liver of dog is
a) Right medial
b) Left medial
c) Right lateral
d) Left lateral

247. Which of the following is not a splanchnic bone
a) Os pedis
b) Os penis
c) Os cordis
d) Os phrenic

248. Structure on which the mandibular salivary gland opens in to the mouth
a) Papilla salivalis
b) Barb
c) Frenulum linguae
d) Anterior pillar

249. Type of dentition in carnivores is
a) Selenodont
b) Bunodont
c) Lophodont
d) Secodont

250. "Peg teeth" are characteristic of
a) Rabbit
b) Goat
c) Horse
d) Dog

251. Zygomatic salivary gland is present in
a) Horse
b) Cattle
c) Dog
d) Fowl

252. Diverticulum pharyngeum is present in
a) Carnivores
b) Porcine
c) Equines
d) Bovines

253. Foramen dextrum of the diaphragm is for the passage of
a) Caudal vena cava
b) Aorta
c) Oesophagus
d) Vagus nerve

254. The smallest compartment of the stomach in cattle is
a) Rumen
b) Omasum
c) Reticulum
d) Abomasum

255. The compartment of ruminant stomach involved in "Hard ware disease" is
a) Rumen
b) Reticulum
c) Omasum
d) Abomasum

256. Margoplicatus is present in the stomach of
a) Cattle
b) Dog
c) Pig
d) Horse

257. The glandular stomach in fowl is
a) Ventriculus
b) Proventriculus
c) Gizzard
d) Crop

258. The liver is connected to the stomach by
a) Lesser omentum
b) Greater omentum
c) Mesentery
d) Falciform ligament

259. Renal impression is absent in the liver of
a) Dog
b) Cattle
c) Horse
d) Pig

260. In horses, the spleen is
a) Elliptical
b) Human foot shaped
c) Sickle shaped
d) Oyster shell shaped

261. Apical bronchus is present in
a) Ox
b) Horse
c) Dog
d) Fowl

262. In horses, the right kidney is
a) Bean shaped
b) Elliptical
c) Heart shaped
d) Elongated

263. Gall bladder is absent in
a) Cattle
b) Pig
c) Fowl
d) Horse

264. In pigs, the sigmoid flexure is
a) Inguinal
b) Post-scrotal
c) Absent
d) Pre-scrotal

265. 'V' shaped uterus is seen in
a) Bitch
b) Mare
c) Sow
d) Cow

266. The primordial germ cells (PMGs) originate from
a) Yolk sac
b) Chorion
c) Amnion
d) Gonad

267. Remnant of Wolffian duct in female is
a) Uterus masculinus
b) Paradidymis
c) Gartner's canal
d) Colliculus seminalis

268. The functional kidney in mammals is
a) Mesonephros
b) Pronephros
c) Matanephros
d) None of the above

269. The tuberculum impar is a primordium of
a) Teeth
b) Lungs
c) Testis
d) Tongue

270. Foetal membrane that serves as the "functional lung" in birds is
a) Allantois
b) Yolk sac
c) Amnion
d) Chorion

271. Type of cleavage in birds is
a) Total-equal
b) Partial-superficial
c) Total-unequal
d) Partial-discoidal

272. Type of placenta in equines is
a) Zonary
b) Diffuse
c) Cotyledonary
d) Discoid

273. Urachus is the remnant of
a) Yolk sac
b) Amnion
c) Chorion
d) Allantois

274. Pairing of homologous chromosomes occurs during
a) Leptotene
b) Zygotene
c) Pachytene
d) Diplotene

275. The type of implantation in dog is
a) Superficial
b) Eccentric
c) Interstitial
d) None of the above

276. Germ layer origin of thyroid gland is
a) Ectoderm
b) Mesoderm
c) Endoderm
d) Splanchnic mesoderm

277. Epithelium of the trachea is
a) Simple cuboidal
b) Transitional
c) Pseudostratified ciliated columnard) Simple columnar

278. Hassall's corpuscles are seen in
a) Thymus
b) Tonsils
c) Haemal nodes
d) Spleen

279. Brunner's glands are seen in
a) Ileum
b) Jejunum
c) Large intestine
d) Duodenum

280. Macula densa is found in
a) PCT
b) DCT
c) Afferent arteriole
d) Efferent arteriole

281. Spaces of Disse are seen in
a) Spleen
b) Lungs
c) Liver
d) Intestine

282. Sertoli cells produce
a) Testosterone
b) Oestrogen
c) Cortisol
d) Insulin

283. Thyrocalcitonin is produced by
a) Thyroid follicular cells
b) Chief cells of parathyroid
c) Parafollicular "C" cells of thyroid
d) Oxyphil cells of parathyroid

284. Pseudolobulated kidney is seen in
a) Cattle
b) Dog
c) Horse
d) Pig

285. "Herring bodies" are seen in
a) Synapses
b) Conduction neurons
c) Neurosecretory neurons
d) Macrophages

286. Commonly used fixative for tissue collection is
a) Acetone
b) Chloroform
c) Ethyl alcohol
d) 10% neutral buffered formalin

287. "Cart wheel" appearance of nucleus is characteristic of
a) Histiocytes
b) Monocytes
c) Plasma cells
d) Lymphocytes

288. The sequence of facial artery, facial vein and parotid duct in the facial region of cattle from rostral to caudal is
a) Vein-artery-duct
b) Duct- artery-vein
c) Artery-duct-vein
d) Artery-vein-duct

289. Viborg's triangle is the site for access of
a) Parotid salivary gland
b) Mandibulary nerve block
c) Paracentecis thoracis
d) Guttural pouches

290. The indication for cornual block in cattle is
a) Extirpation of eye ball
b) Amputation of horn
c) Ligation of Stenson's duct
d) Extraction of upper 5th molar

291. From 4th cervical to the 3rd thoracic vertebrae, the oesophagus courses on the
a) Left side of trachea
b) Right side of trachea
c) Dorsal aspect of trachea
d) Ventral aspect of trachea

292. Compression of oesophagus is common due to the enlargement of
a) Tracheo-bronchial lymph nodes
b) Cranial mediastinal lymph nodes
c) Middle mediastinal lymph nodes
d) Caudal mediastinal lymph nodes

293. Roaring in horse is caused by the paralysis of
a) Phrenic nerve
b) Right recurrent laryngeal nerve
c) Left recurrent laryngeal nerve
d) Long thoracic nerve

294. The supra mammary lymph node is located at the
a) Cranial border of the udder
b) Caudal border of the udder
b) Medial to the flap of the flank
d) Lateral border of the udder

295. Common site for taking pulse in goats is
a) Femoral artery
b) Facial artery
c) Coccygeal artery
d) Carotid artery

296. The epidural anaesthesia is indicated for
a) Vaginal prolapse
b) Amputation of tail
c) To reduce straining while parturition
d) All of the above

297. While correcting dystocia, the nerve that may get damaged is
a) Sciatic nerve
b) Femoral nerve
c) Obturator nerve
d) Caudal gluteal nerve

298. The preferred site for rumenotomy is
a) Mid-ventral on linea alba
b) Right Para lumbar fossa
c) Right Para costal
d) Left Para lumbar

299. Sub urethral diverticulum is absent in
a) Cow
b) Sow
c) Mare
d) Ewe

300. Paired caeca are characteristic of
a) Rabbit
b) Pig
c) Fowl
d) Dog

301. Position of empty urinary bladder in cow is
a) Abdominal floor
b) Dorsal to uterus
c) Dorsal to rectum
d) Ventral to uterus

302. The "coffin joint" is
a) Carpo-metacarpal joint
b) Metacarpo-phalangeal joint
c) First interphalangeal joint
d) Second interphalangeal joint

303. In dog, the infraorbital foramen is located
a) Opposite to upper 5th cheek tooth
b) Opposite to upper 3rd cheek tooth
c) Opposite to lower 5th cheek tooth
d) Opposite to lower 3rd ch. tooth

304. In horses, Galveyne's groove appears on
a) Upper third incisor
b) Upper first cheek tooth
c) Lower third incisor
d) Lower first cheek tooth

305. In cattle, the mesenteric lymph nodes are seen
a) Around the root of mesentery
b) Near attached border of mesentery
c) Scattered throughout the mesentery
d) None of the above

306. The compartment of oviduct in fowl where egg shell is formed
a) Magnum
b) Isthmus
c) Uterus
d) Infundibulum

307. In dogs, urethral calculi may be frequently seen
a) Posterior to os-penis
b) Anterior to os-penis
c) near external urethral orifice
d) Near neck of urinary bladder

308. The layer of scrotum that helps in its movement according to temperature is
a) Skin
b) Dartos
c) Tunica vaginalis
d) All of the above

309. The animal with preputial diverticulum is
a) Stallion
b) Dog
c) Boar
d) Bull

310. Anal glands are seen in
a) Pig
b) Goat
c) Ox
d) Dog

311. Hardest bone in the body
a) Basioccipital
b) Petrous temporal
c) Basisphenoid
d) Squamous temporal

312. Largest paranasal sinus in horse is
a) Frontal
b) Maxillary
c) Sphenoidal
d) Palatine

313. Bone forming the partition between cranial and nasal cavities
a) Frontal
b) Sphenoid
c) Occipital
d) Ethmoid

314. Well developed dorsal spine is a feature of
a) Cervical vertebrae
b) Thoracic vertebrae
c) Lumbar vertebrae
d) Sacral vertebrae

315. Longest vertebra in the body
a) Atlas
b) Axis
c) 1st coccygeal vertebra
d) 6th cervical vertebra

316. Boat-shaped sternum is present in
a) Ox
b) Sheep
c) Horse
d) Pig

317. The muscle seen in the musculospiral groove of humerus
a) Biceps brachii
b) Coracobrachialis
c) Brachialis
d) Triceps brachii

318. Atlanto-axial joint is an example of
a) Trochoid
b) Gomphosis
c) Hinge joint
d) None of the above

319. Angular process of mandible is seen in
a) Ox
b) Pig
c) Horse
d) Dog

320. Pituitary gland is located in
a) Dorsum sellae
b) Lacrimal fossa
c) Sella turcica
d) Ethmoidal fossa

321. Foramen transversarium is a characteristic feature of
a) Cervical vertebrae
b) Thoracic vertebrae
c) Lumbar vertebrae
d) Sacral vertebrae

322. Ligamentum nuchae is absent in
a) Ox
b) Pig
c) Horse
d) Dog

323. Largest flat bone in the body
a) Scapula
b) Os coxae
c) Frontal bone
d) Mandible

324. Point of hip is formed by
a) Tuber coxae
b) Tuber ischii
c) Tuber calcis
d) Pin bone

325. Supratrochlear foramen is a characteristic feature of humerus of
a) Ox
b) Pig
c) Horse
d) Dog

326. Major extensor of shoulder joint
a) Supraspinatus
b) Infraspinatus
c) Subscapularis
d) Triceps brachii

327. Sesamoid among the carpal bones
a) Radial carpal
b) Intermediate carpal
c) Ulnar carpal
d) Accessory carpal

328. Articular disc is seen in
a) Elbow joint
b) Hock joint
c) Shoulder joint
d) Temporo-mandibular joint

329. Longest bone in fowl
a) Tibiotarsus
b) Tarsometatarsus
c) Femur
d) Humerus

330. Implantation of tooth in the alveolus is a type of
a) Suture
b) Syndesmosis
c) Gomphosis
d) Synarthrosis

331. Condensation of pia mater along the sides of spinal cord
a) Lamina splendens
b) Dentate ligament
c) Filum terminale
d) Cauda equina

332. Collection of neurons outside the CNS
a) Nucleus
b) Fasciculus
c) Ganglion
d) Funiculus

333. Largest commissure of cerebral hemispheres
a) Corpus callosum
b) Anterior commissure
c) Posterior commissure
d) Hippocampal commissure

334. Dropped elbow is due to the paralysis of
a) Median nerve
b) Ulnar nerve
c) Axillary nerve
d) Radial nerve

335. An almond-shaped gray complex which is considered as a part of both basal ganglia and limbic system
a) Caudate nucleus
b) Lenticular nucleus
c) Claustrum
d) Amygdaloid body

336. Quadriceps femoris is supplied by
a) Obturator nerve
b) Femoral nerve
c) Tibial nerve
d) Fibular nerve

337. Coronary sinus is found in
a) Right atrium
b) Left atrium
c) Right ventricle
d) Left ventricle

338. Conus arteriosus is found in
a) Right atrium
b) Left atrium
c) Right ventricle
d) Left ventricle

339. Apex of the heart is located in
a) Right atrium
b) Left atrium
c) Right ventricle
d) Left ventricle

340. Preferred site for intravenous injection in dog
a) Anterior vena cava
b) Posterior vena cava
c) External jugular vein
d) Cephalic vein

341. Nutrient blood vessel to the liver
a) Portal vein
b) Hepatic artery
c) Coeliac artery
d) Splenic artery

342. Adductor muscles of the thigh are supplied by
a) Obturator nerve
b) Femoral nerve
c) Tibial nerve
d) Fibular nerve

343. Lateral ventricles communicate with the third ventricle through
a) Foramen of Monro
b) Foramen of Luschka
c) Aqueduct of Sylvius
d) Foramen of Magendie

344. An example for projection fibres
a) Corpus callosum
b) Cingulum
c) Corticospinal tract
d) None of the above

345. The auditory ossicle in birds
a) Malleus
b) Incus
c) Stapes
d) Columella

346. Tapetumm lucidum is a part of
a) Sclera
b) Choroid
c) Ciliary body
d) Iris

347. White of the eye is formed by
a) Sclera
b) Choroid
c) Ciliary body
d) Iris

348. Basic unit of lymph transportation
a) Lymph node
b) Lymphangeon
c) Lymphatic sinus
d) Cysterna chyli

349. Stomach is fully glandular in
a) Ox
b) Horse
c) Pig
d) Dog

350. Duct of mandibular salivary gland
a) Stenson's duct
b) Wharton's duct
c) Duct of Santorini
d) Duct of Wirsung

351. Paired laryngeal cartilage
a) Thyroid
b) Cricoid
c) Arytenoid
d) Epiglottis

352. Accessory sex gland in dog
a) Seminal vesicle
b) Prostate
c) Cowpers
d) Ampulla

353. Cup-shaped uterine caruncles are present in
a) Cow
b) Ewe
c) Mare
d) Bitch

354. Bunodont type of teeth is present in
a) Ox
b) Horse
c) Pig
d) Dog

355. Globular spleen is seen in
a) Ox
b) Horse
c) Pig
d) Fowl

356. V-shaped pancreas is present in
a) Ox
b) Horse
c) Pig
d) Dog

357. Lobulated kidney is present in
a) Ox
b) Horse
c) Pig
d) Dog

358. Spleen is scythe-shaped in
a) Ox
b) Horse
c) Pig
d) Dog

359. Cardiac impression on the liver is seen in
a) Ox
b) Horse
c) Rabbit
d) Fowl

360. Cloacal compartment to which oviduct opens
a) Coprodeum
b) Urodeum
c) Proctodeum
d) None of the above

361. Sigmoid flexure of the penis is post-scrotal in
a) Bull
b) Stallion
c) Dog
c) Boar

362. Uterine horns are coiled in
a) Cow
b) Mare
c) Sow
d) Bitch

363. Soft palate is well developed and long in
a) Ox
b) Horse
c) Pig
d) Dog

364. Pharyngeal diverticulum is present in
a) Cow
b) Mare
c) Sow
d) Bitch

365. Peyer's patches are characteristic to
a) Duodenum
b) Jejunum
c) Ileum
d) Colon

366. Von Ebner's glands are seen in
a) Fungiform papilla
b) Vallate papilla
c) Filiform papilla
d) Conical papilla

367. Type of epithelium lining oesophagus
a) Simple squamous
b) Stratified squamous
c) Simple columnar
d) Transitional

368. Type of epithelium lining fundic stomach
a) Simple squamous
b) Stratified squamous
c) Simple columnar
d) Transitional

369. Purkinje cells are seen in
a) Cerebrum
b) Cerebellum
c) Heart
d) Pituitary

370. Herring bodies are seen in
a) Cerebrum
b) Cerebellum
c) Heart
d) Pituitary

371. Acervuli are seen in
a) Cerebrum
b) Cerebellum
c) Pineal gland
d) Pituitary

372. Centroacinar cells are seen in
a) Liver
b) Pancreas
c) Lungs
d) Mammary gland

373. The fundic gland cell showing eosinophilic cytoplasm is
a) Chief cell
b) Parietal cell
c) Mucous neck cell
d) Argentaffin cell

374. Juxtaglomerular cells are associated with
a) Afferent arteriole
b) Efferent arteriole
c) DST
d) PCT

375. The endocrine gland derived from endoderm
a) Pituitary
b) Adrenal
c) Thyroid
d) Pineal

376. The organ having double germ layer origin
a) Adrenal
b) Liver
c) Pituitary
d) Pancreas

377. Type of placenta in cow
a) Epitheliochorial
b) Syndesmochorial
c) Endotheliochorial
d) Haemoendothelial

378. Nervous system is derived from
a) Ectoderm
b) Mesoderm
c) Endoderm
d) None of the above

379. Musculoskeletal system is derived from
a) Ectoderm
b) Mesoderm
c) Endoderm
d) None of the above

380. Liver is derived from
a) Ectoderm
b) Mesoderm
c) Endoderm
d) None of the above

381. Spleen is derived from
a) Ectoderm
b) Mesoderm
c) Endoderm
d) None of the above

382. Primordium for the diaphragm
a) Septum primum
b) Septum secundum
c) Septum transversum
d) Cupola

383. Zonary placenta is seen in
a) Cow
b) Mare
c) Bitch
d) Sow

384. Dust cells are seen in
a) Liver
b) Pancreas
c) Lungs
d) Mammary gland

385. Corpora amylacea is associated with
a) Liver
b) Pancreas
c) Lungs
d) Mammary gland

386. Lophodont type of dentition is seen in
a) Ox
b) Horse
c) Pig
d) Dog

387. Foramen of exit of mandibular nerve in ox
a) Hypoglossal
b) Jugular
c) F. Orbitorotundum
d) F. Ovale

388. Foramen of exit of glossopharyngeal nerve in ox
a) Hypoglossal
b) Jugular
c) F. Orbitorotundum
d) F. Ovale

389. Preferential site for recording pulse in dog
a) Middle coccygeal artery
b) Femoral artery
c) Axillary artery
d) Median artery

390. Ligament of the pelvis that is relaxed during parturition
a) Pubofemoral lig.
b) Round lig.
c) Sacroischiatic lig.
d) None of the above

391. Largest salivary gland in horse
a) Parotid
b) Mandibular
c) Lingual
d) Zygomatic

392. Pudendal nerve block is done for surgical interference with
a) Scrotum
b) Testis
c) Penis
d) Rectus abdomonis

393. Roaring in horses is due to paralysis of
a) Cranial laryngeal nerve
b) Recurrent laryngeal nerve
c) Facial nerve
d) Maxillary nerve

394. Preferred site for collection of CSF in dog
a) Cisterna magna
b) Lumbar cistern
c) Cisterna pontis
d) Cisterna chiasmatis

395. Storage spleen is found in
a) Ox
b) Dog
c) Pig
d) Rabbit

396. Comma-shaped caecum is found in
a) Ox
b) Horse
c) Pig
d) Dog

397. Taenia ceci and coli are found in
a) Ox
b) Horse
c) Goat
d) Dog

398. Interlobular connective tissue is well developed in the liver of
a) Ox
b) Horse
c) Pig
d) Dog

399. Unilobar unipyramidal kidney is found in
a) Ox
b) Fowl
c) Pig
d) Dog

400. Body of the prostate gland is absent in
a) Ox
b) Goat
c) Pig
d) Dog

401. Primary follicles occur in clusters in the ovary of
a) Cow
b) Mare
c) Sow
d) Bitch

402. In avian oviduct, fertilization occurs in
a) Infundibulum
b) Magnum
c) Uterus
d) Utero-vaginal junction

403. Canine fossa is found in
a) Ox
b) Horse
c) Pig
d) Dog

404. Largest sensory nucleus of the brain
a) Red nucleus
b) Thalamus
c) Substantia nigra
d) Pontine nucleus

405. Motor nerve supply to the tongue
a) Glossopharygeal
b) Vagus
c) Spinal accessory
d) Hypoglossal

KEY ANSWERS

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
c	a	c	b	a	b	d	b	b	b	d	d	b	c	a
16	17	18	19	20	21	22	23	24	25	26	27	28	29	30
a	a	a	c	a	c	a	b	b	a	a	b	a	c	a
31	32	33	34	35	36	37	38	39	40	41	42	43	44	45
a	b	c	a	c	c	b	b	c	b	b	c	a	b	a
46	47	48	49	50	51	52	53	54	55	56	57	58	59	60
b	c	d	a	d	a	a	c	a	c	b	d	b	c	c
61	62	63	64	65	66	67	68	69	70	71	72	73	74	75
a	b	b	c	b	d	a	a	d	a	c	c	b	c	b
76	77	78	79	80	81	82	83	84	85	86	87	88	89	90
b	c	b	c	c	c	c	c	c	d	d	b	c	d	c
91	92	93	94	95	96	97	98	99	100	101	102	103	104	105
b	b	a	c	b	c	b	b	b	c	b	a	a	d	c
106	107	108	109	110	111	112	113	114	115	116	117	118	119	120
c	b	c	a	d	d	c	a	b	c	a	d	a	c	c
121	122	123	124	125	126	127	128	129	130	131	132	133	134	135
d	c	c	d	c	b	b	b	b	c	b	b	d	b	b
136	137	138	139	140	141	142	143	144	145	146	147	148	149	150
c	b	c	b	c	c	d	a	c	a	d	c	a	b	a
151	152	153	154	155	156	157	158	159	160	161	162	163	164	165
a	b	a	b	a	a	b	d	a	d	d	a	c	a	b
166	167	168	169	170	171	172	173	174	175	176	177	178	179	180
a	b	b	d	a	d	b	a	c	c	c	d	b	a	b
181	182	183	184	185	186	187	188	189	190	191	192	193	194	195
a	b	d	c	c	b	a	d	b	c	b	b	d	a	c
196	197	198	199	200	201	202	203	204	205	206	207	208	209	210
b	d	d	a	c	a	b	d	b	a	b	c	a	d	a
211	212	213	214	215	216	217	218	219	220	221	222	223	224	225
b	c	c	d	b	c	d	a	b	a	d	c	a	b	b
226	227	228	229	230	231	232	233	234	235	236	237	238	239	240
c	b	a	c	b	c	d	c	b	a	d	b	c	b	c
241	242	243	244	245	246	247	248	249	250	251	252	253	254	255
b	c	a	b	a	d	a	b	d	a	c	b	a	c	b
256	257	258	259	260	261	262	263	264	265	266	267	268	269	270
d	b	a	d	c	a	c	d	d	a	a	c	c	d	a
271	272	273	274	275	276	277	278	279	280	281	282	283	284	285
d	b	d	b	a	c	c	a	d	b	c	b	c	d	d
286	287	288	289	290	291	292	293	294	295	296	297	298	299	300
d	c	d	d	b	a	d	c	b	a	d	c	d	c	c
301	302	303	304	305	306	307	308	309	310	311	312	313	314	315
d	d	b	a	b	c	a	b	c	d	b	b	d	b	b
316	317	318	319	320	321	322	323	324	325	326	327	328	329	330
c	c	a	d	c	a	b	b	a	d	a	d	d	a	c
331	332	333	334	335	336	337	338	339	340	341	342	343	344	345

331 332 333 334 335 336 337 338 339 340 341 342 343 344 345

b	c	a	d	d	b	a	c	d	d	b	a	a	c	d
346	347	348	349	350	351	352	353	354	355	356	357	358	359	360
b	a	b	d	b	c	b	b	c	d	d	a	b	d	b
361	362	363	364	365	366	367	368	369	370	371	372	373	374	375
a	c	b	c	c	b	b	c	b	d	c	b	b	a	c
376	377	378	379	380	381	382	383	384	385	386	387	388	389	390
a	b	a	b	c	b	c	c	c	d	b	d	b	b	c
391	392	393	394	395	396	397	398	399	400	401	402	403	404	405
a	c	b	a	b	b	b	c	d	b	d	a	c	b	d

II. Fill in the blanks:

1. The visceral bone present in the heart of cattle is known as..Os cordis
2. Acromion process is absent in the scapula of....Horse
3. The largest sesamoid bone is .....Patella
4. Sella turcica is seen in....Sphenoid bone
5. Non-articular sulcus present in the head of the femur is called.Fovia capitis
6. Dorsal spinous processes are well-developed in....Thoracic vertebrae
7. The bone helping the elevation of beak is called....Quadrate bone
8. Point of hock is formed by ..Tuber calcis
9. Immovable joint is otherwise called as.....Synarthrosis
10. The superior and inferior check ligaments are peculiar to ..Horse....(species)
11. The pubo femoral ligament prevents abduction and limits side kicking in horses.
12. The oval depression in the inter atrial septum is fossa ovalis..and is the fetal remnant of..foramen ovale
13. The four-sided arterial network around the pituitary gland is known as Rete mirable Cerebri
14. The major lymph reservoir formed by the union of lumbar and gastrointestinal trunks is ..Cisterna chyli
15. Two cerebral hemispheres connected by a sheet of white matter is called as ..Corpus Callosum
16. The outer most meninges of the brain is ..Dura mater and the innermost meninges is ..pia mater
17. The posterior lumbosacral plexus is divided into three major nerves viz..Anterior & post gluteal & Ischiatic
18. The instrument used to section organs, a few microns thick is called ..microtome
19. The electron microscope uses .Electron.... beams instead of light and electromagnetic fields in place of lenses to study tissues.
20. The protoplasm of cell body is called ...cytoplasm
21. During cell division the Centrosome becomes distinct.
22. Reduction division or meiosis is a special kind of division observed in ..germ.. cells resulting in the reduction of chromosomes.
23. The cells are held together by small amounts of a viscous substance known as ..Intercellular Cement
24. Motile cilia are called Kinocilia..while non-motile cilia are called Stereocilia
25. The specialized epithelial cells concerned with the reception of sensory stimuli are called .Neuroepithelia
26. The nucleus of a plasma cell appears like a ..Cart wheel
27. Histiocytes are also called ..Macrophages
28. Capsules of organs are examples of ..Dense irregular.. connective tissue.
29. Perichondrium is absent in .Fibro.. cartilage.
30. Iris of the eye has cells of ..pigmented.. connective tissue.
31. Haversian system is absent in Cancellated bone.
32. Elliptical nucleated erythrocytes are found in Fowl (species).

33. The term microphage refers to ..Neutrophil
34. The three types of muscle cells are ..Smooth, Skeletal & cardiac
35. Neurons may be classified as Unipolar, bipolar & multipolar
36. The female germ cell that is actually fertilized is a ..Secondary oocyte excepting in the dog and horse.
37. Cleavage results in the formation of many smaller cells called ..Blastomeres
38. The mammalian ovum is surrounded with an acellular glycoprotein called .Zona pellucid
39. In birds, cleavage is not ..Complete
40. The fluid filled cavity found within a blastula is called ..Blastocoel
41. Gastrulation in chick is by a process called ..Involution
42. The term karyokinesis refers to ..Mitosis
43. Gastrulation in amphioxus is by a process called ..Invaginations
44. Total cleavage is otherwise called as Holoblastic cleavage.
45. The Allantois cavity serves to collect the urinary excretory wastes in embryo.
46. The primitive gut is also called as ..Archenteron
47. Neutrophils in fowls, are called as ..Heterophils
48. Os penis is an example for .Visceral / splanchnic type of bone.
49. In dog, olecranon and coronoid fossae are communicated through..Supratrochlear foramen.
50. In horse, sternum is made up of ..seven sternebra.
51. Well developed transverse process is the characteristic feature of ..Lumbar vertebra.
52. Example for ball and socket joint is ..Hip & Shoulder joint
53. Two divisions of the Brachiocephalicus muscle are cleido-occipitalis and..cleido-mastoideus
54. orbicularis oculi is sphincter muscle situated around the eye.
55. Anterior most muscle of hip and thigh is..Tensor Fascia latae
56. Radial head is the smallest and deepest head of deep digital flexor of forearm.
57. Extensor carpi radialis is the largest muscle among the extensors of forearm.
58. The apex of the heart is formed by ..Left ventricle
59. The two terminal branches of the sciatic nerve are peroneal and ..Tibial
60. Floor of the lateral ventricle is formed by ..Caudate nucleus in front and ..Hippocampus behind.
61. Lateral ventricles of the brain communicate with the third ventricle through Interventricular foramen of Monro
62. Cornual nerve is a branch of ..zygomatic-temporal which is an ophthalmic branch of Trigeminal nerve.
63. The crescentic fold of duramater between the cerebrum and cerebellum is known as ..Tentorium cerebelli
64. The anterior cerebellar peduncles are known as ..Brachium Conjunctivum
65. The longest cranial nerve refers to the ..Vagus...
66. The major sensory branches of the trigeminal nerve are ophthalmic and ..maxillary nerves.
67. The sensory nerve concerned with the sensation of hearing and equilibrium is..Auditory / Acoustic / Vestibulocochlear
68. The biceps brachii is innervated by the ..musculocutaneous nerve.
69. The anterior part of lumbo-sacral plexus gives rise to ..lat. Cutaneous femoral, ..femoral..... and ..obturator. nerve.
70. The sciatic nerve after giving peroneal nerve continues as ..Tibial...
71. The nervus transversarius arises from the ..Stellate.. ganglion.
72. The interior of the auricle presents muscular ridges called..musculi pectinati
73. The pulmonary veins open into the ..Left auricle of the heart.
74. The proximal collateral ulnar artery arises from the ..Brachial
75. The venous blood drained by the gastric and mesenteric trunks form the portal vein which conveys functional blood to the liver.
76. The omaso-abomasal artery is a continuation of the ..Coeliac artery

77. In the female, the analog of the internal spermatic artery is known as Utero ovarian artery
78. The internal iliac artery after giving off the posterior gluteal artery continues as Internal Pudendal artery in the male.
79. The lumbar and gastrointestinal trunks unite to form a lymph reservoir, Cisterna chili that continues as the Thoracic duct
80. The Hard palate forms the roof of the cavum oris.
81. The Mesentry.. is a double fold of peritoneum which attaches the intestine to roof of the abdomen.
82. The common nasal meatus is formed between the turbinate bones and the Nasal Septum
83. The pharynx communicates with the middle ear through the Eustachean tube
84. Two compartments of the cell are Cytoplasm & nucleus
85. Centriole is absent in Ovum/neuron
86. Fibrous membrane investing the outer surface of the cartilage is perichondrium
87. Bone forming cells are known as Osteoplasts
88. Epithelium tissue has greatest power of regeneration.
89. The tunics of the artery are Tunica intima, tunica media and tunica adventitia
90. Suicide bags of the cell are Lysosomes
91. Two varieties of the bone marrow are Red... and Yellow marrow
92. Classical example of mucus connective tissue is Umbilical cord
93. The splanchnopleurae is formed externally by mesoderm and internally by endoderm
94. The primitive gut is also called as Archenteron
95. The first branchial arch divides into maxillary.. and mandibular process
96. The scapula of the fowl is Sabre shaped.
97. The distal extremity of fibula is called Lateral malleolus in the ox.
98. The shaft of tibia describes a double curve in the Carina (species).
99. In the distal extremity of femur above each condyle is a sesamoid bone called Fabella in the dog.
100. The union of foramina transversarii in the ox form a canal called Canalis transversarium
101. The biceps brachii muscle arises from Supraglenoid tubercle
102. Transversus Thoracis muscle is present in the floor of thorax.
103. Ball Socket Shoulder, Hip is an example of enarthrodial joint.
104. The distal extremity of tibia presents an articular area called Cochlea tibii
105. The intrathoracic branches of subclavian artery are .....and.....
106. The four cutaneous antebrachial nerves are .....which are derived from ..... parent nerves, respectively.
107. The main nerves supplying the pes region are ..... and.....
108. The three main part of the ear are .....
109. ....., ... and ..... nerves are associated with parasympathetic innervation of the head region.
110. Ansa axillaries is formed by ..... nerves.
111. Infraspinatus muscle is supplied by ..... nerve.
112. ..... is the major blood supply to the extensors of the carpus and digits.
113. Deep brachial artery supplies ..... muscle.
114. Pudendoepigastric trunk divides into ..... and ..... arteries.
115. Femoral nerve supplies ..... muscle.
116. Adductor muscle is supplied by ..... nerve.
117. ..... nerve supplies the dorsomedial aspect of the manus.
118. Costocervical trunk divides into ....., ...,.....
119. Serratus ventralis thoracis muscle is supplied by ..... nerve.
120. Superficial cervical artery is a branch of ..... artery.

121. The main terminal branches of facial nerve are .....
122. Superficial temporal artery is a branch of ..... artery.
123. The corniculate process is associated with .....cartilage of the larynx.
124. .....is present at the bifurcation of the trachea which acts as voice box in fowl.
125. Heart shaped right kidney is found in .....
126. ..... is the endocrine gland that is in relation with the cranial pole of the kidney in ox.
127. Renal pelvis is absent in the .....
128. The openings of the renal papillary ducts form a sieve like area called .....
129. The glans penis of dog consists of two parts namely .....
130. The homologue of penis in the female is called .....
131. The monostomatic sublingual salivary duct opens along with ..... duct.
132. The zygomatic salivary gland is described in the ..... (sp.).
133. ..... is present in the loop of duodenum in fowl.
134. The prominence in the wall of abomasum at its termination is called .....
135. ..... communicates omental cavity with peritoneal cavity.
136. The sock shaped spleen is described in the .....
137. ..... arises from the trachea at the level of 3rd rib on the right side in ox.
138. The two parts of prostate in ox are ..... and .....
139. The sigmoid curve of the penis is located prescrotal in ..... (Sp.).
140. The penile spines are present in penis of .....sp.
141. ..... is an example of heterotopic skeleton.
142. ..... type of ossification is seen in long bones.
143. The spine of the scapula terminates distally forming the .....
144. The coronoid process is described in the proximal extremity of ..... bone in ox.
145. The clavicles of the two sides unite ventrally forming ..... in fowl.
146. ..... bone is the longest bone in fowl.
147. The last pair of rib is floating in ..... (sp.).
148. The cartilage attaching to the caudal extremity of sternum is called .....
149. ..... is a movement that tends to rotate an extremity so that the dorsum faces up.
150. ..... refers to a movement in which the angle between segments is increased beyond 180 degrees.
151. ..... arises from the caudal surface of radius and forms a part of stay apparatus in the horse.
152. The bones of the shoulder girdle of fowl unite to form a foramen called .....
153. The lesser ischiatic notch is twisted in appearance in ..... (sp.).
154. The anterior end of the body of axis centrally presents .....
155. ..... is called vertebra prominence in 7th cervical vertebra.
156. The tubercle of the rib articulates with ..... on the transverse processs of ..... vertebra.
157. The squamous part of occipital is crossed externally by a prominent, transverse and horizontal ridge in horse called .....
158. The two processes that extend from the body of premaxilla are .....
159. ..... is the opening of the great cardiac vein into the sinus venarum below the opening of posterior vena cava into right atrium.
160. The costocervical trunk is a branch of ..... in the thorax.
161. The musculophrenic and cranial epigastric arteries are branches of .....
162. The vertebral artery enters ..... foramen.
163. The thoracodorsal artery is a branch of ..... artery.
164. The right gastroepiploic artery runs along the ..... curvature of the abomasum.

165. The radial artery is a branch of ..... artery.
166. The popliteal artery is the continuation of ..... artery.
167. Cephalic vein is chosen for giving intravenous injections in .....(sp.).
168. ..... lymph node is situatead at the neck of the scrotum.
169. ..... lymph node is present dorsal to the terminal part of oesophagus.
170. The pulley like articular area is called .....
171. A deep cup like articular area is called .....
172. The distal extremity projects to form ..... in the ulna of ox.
173. ..... is an example of aborted long bone.
174. The bicipital groove of humerus is divided by an intermediate ridge in ..... (sp.).
175. The caudal end of the rib gives rise to ..... in the fowl.
176. The sternum of the horse is characterized by .....
177. ..... forms the bone of the croup region.
178. ..... is the movement of an extremity towards the median plane.
179. ..... connects fovea capitis to the acetabular fossa.
180. ..... attaches dens of axis to neural ring of atlas.
181. The anterior and posterior pillars of pharynx are also called ..... arches respectively.
182. The oesophagus turns to the left at the level of ..... vertebra in ox.
183. ..... communicates reticulo-omasal orifice with omasoabomasal orifice.
184. ..... is present between right ventral and left ventral colon of horse.
185. The diverticulum duodeni contains the openings of ..... and ..... in horse.
186. ..... is seen on the interior of dorsal wall of urinary bladder in ox.
187. ..... comes in the way of catheterization of urinary bladder in cow.
188. Anal sacs are described in the ventrolateral wall of anus in ..... (sp.).
189. The homologue of uterus present in male is called .....
190. The skeleton of animal is divided into two parts namely ..... and .....
191. ..... is the example for the visceral bone in dog.
192. ..... is the longest bone in the skeleton of ox.
193. The bones of shoulder girdle of fowl unite to form ..... foramen.
194. ..... is the chief inspiratory muscle.
195. ..... is the most cranial muscle in the arm region.
196. The distal sesamoid bone of horse is called as .....
197. A peg fitting into socket is a type of joint called .....
198. ..... nerve supplies the skin on the caudal aspect of the forearm which is a branch of ulnar nerve.
199. The teeth of upper jaw are supplied by the branches of ..... nerve.
200. ..... nerve pass through cribriform plate of the ethamoid.
201. In the foetal circulation blood normally flows from right atrium into left atrium through .....
202. The two terminal branches of the internal iliac artery are ..... and .....
203. .....is situated in the mucus membrane opposite the upper 5th cheek tooth in cow.
204. ..... is located on the midline between the dental pad and 1st transverse ridge of the hard palate.
205. ..... is the dome shaped area of rumen and reticulum on which oesophagus opens.
206. ..... is present at the point of bifurcation of trachea in fowl.
207. In the distal extremity of scapula above the glenoid cavity cranially is ..... tubercle which provides origin for .....

208. In the distal extremity of humerus above the condyle cranially is ..... fossa and caudally is olecranon fossa.
209. ..... is a sesamoid bone among the carpals in the ox.
210. The cranial border of olecranon about its middle bears .....which overhangs the trochlear notch.
211. The highest point in the dorsal aspect of distal phalanx is called ..... which provides attachment to extensor muscle.
212. The sacropelvic surface of ilium presents two parts a medial triangular part called ..... and a lateral quadrilateral part called .....
213. In the distal third of shaft of femur above the condyles is a fossa called ..... which provides origin to .....
214. The patellar ligaments are attached distally to the ..... of tibia.
215. The ventral division of transverse process is a large quadrilateral plate in.....
216. From the distal third of medial aspect of arm .....nerve separates from the median to supply brachialis.
217. ..... nerve passes from medial to lateral aspect of shoulder joint to innervate the deltoideus.
218. ..... nerve lies on lateral aspect of arm under lateral head of triceps and over the brachialis.
219. ..... arising from internal iliac artery passes through greater sciatic foramen and supply middle gluteus muscle.
220. The umbilical artery is a branch of .....
221. The cone shaped termination of spinal cord is called .....
222. ..... is present on the dorsal root of spinal nerve.
223. The position of anguli oris in dog is at the level of .....tooth.
224. The coils of descending colon and small intestines of horse can be differentiated by .....and .....
225. The apical bronchus is decribed in ..... (sp.).
226. The enamel of the teeth is derived from ..... (germ layer).
227. The thickened areas of adhesions between the epithelial cells are called as.....
228. Two variety of embryonic connective tisues are ..... and .....
229. The cells of the seminiferous tubule which nourish the spermatogenic cells are.....
230. Aggregations of lymph nodules present in the sub-mucosa of ileum is called as.....
231. Chromophil substance present in the nerve cell body is also called as.....
232. Interruptions present in the myelin sheath are called as .....
233. Star shaped cells present between the secreting cells and the basement membrane is .....
234. The erectile tissue present in the penis is .....
235. The glands present in the lamina propria of the uterus are called as .....
236. Groups of serous cells occur at the base of mucous alveoli are .....
237. Tongue is lined by ..... type of epithelium.
238. Intestinal glands present in the lamina propria are also known as .....
239. The process of cell division without growth is known as .....
240. The endocrine part of the pancreas is called as .....
241. The neurosecretory material seen in the pars nervosa of the pituitary is .....
242. After ovulation the Graffian follicle is transformed into a structure called .....
243. The first site of blood formation is in ..... of the yolk sac wall.
244. The most common staining method used for histological study is .....
245. Glands present in the sub-mucosa of the duodenum are known as .....
246. A gel like substance present in the cavity of the thyroid follicle is .....

247. The phagocytic cells lining the sinusoids of the liver is .....
248. The membrane covering the outer surface of the bone is called as .....
249. The endocrine cells seen in the interstitium of the testis is .....
250. Tunica mucosa is comprised of .....
251. ..... stores ATP molecules.
252. .....form the platelets in the bone marrow.
253. Metanephros develops into functional kidney in .....
254. The star shaped supportive cells in the central nerous system are called .....
255. The resolving power of light microscope is .....
256. The dispersed state of chromatin as observed under E/M is called .....
257. ..... is an example of cytogenous gland.
258. During the contraction of the skeletal muscle ..... and .....bands are reduced in size while A band remains constant.
259. .....is a connective tissue cell containing heparin.
260. .....is the phagocytic cell in the CNS.
261. ..... is an immature white blood cell in circulation.
262. Taste buds are found on the dorsal surface of the ..... papillae.
263. Lyssa is characterized by the presence of ..... and ..... in its core in dog.
264. ..... are the microscopic structures present in small intestines to increase the surface area required for absorption of food.
265. ..... is composed of two triangular areas of adjacent hepatic lobules related to their blood supply.
266. Lymphatic nodules are concentrated in the central region of lymph node of .....
267. ..... is a temporary sac for storage of urine of the foetus.
268. The failure of rupture of the anal membrane results in a condition called .....
269. One millimeter is ..... microns.
270. The endoplasmic reticulum, is called ..... in muscular tissue.
271. The peripheral nerve is surrounded by a sheath of loose connective tissue is called .....
272. Pericytes are similar to ..... in their morphology.
273. The mammary glands are ..... type of glands (histologically) and on the basis of secretion they are ..... type.
274. Nasal mucous membrane is lined by ..... type of epithelium.
275. The theory which states that a miniature form of embryo is present either in the ovum or sperm is .....
276. The type of egg in mammals is ..... hence cleavage is ..... type.
277. The two extra embryonic membranes lined by endoderm inside are ..... &.....
278. The migration and proliferation of epiblast cells from caudal to cranial pole of embryo resulting in formation of two parallel lines is .....
279. The dorsal branches of spinal nerves supply groups of muscle called ..... while the ventral branches supply .....groups of muscles.

KEY ANSWERS

1	**Os cordis**	2	**Horse**
3	**Patella**	4	**Sphenoid bone**
5	**Fovia capites**	6	**Thoracic vertebrae**
7	**Quadrate bone**	8	**Tuber calcis**
9	**Synarthrosis**	10	**Horse**
11	**Pubofemoral**	12	**Fossa ovalis; foramen ovale**
13	**Rete mirabile cerebri**	14	**Cisterna chyli**

15	Corpus callosum	16	Dura mater ; Piamater
17	Anterior gluteal, Posterior gluteal and Ischiatic	18	Microtome
19	Electron	20	Cytoplasm
21	Centrosome	22	Germ
23	Intercellular cement	24	Kinocilia ; Stereocilia
25	Neuroepithelia	26	Cart wheel
27	Macrophages	28	Dense irregular
29	Fibro	30	Pigmented
31	Cancellated	32	Fowl
33	Neutrophil	34	Smooth, skeletal & cardiac
35	Unipolar, bipolar & multipolar	36	Secondary oocyte
37	Blastomeres	38	Zona pellucida
39	Complete	40	Blastocoel
41	Involution	42	Mitosis
43	Indentation	44	Holoblastic
45	Allantois	46	Archenteron
47	Heterophils	48	Visceral/splanchnic
49	Supratrochlear	50	Seven
51	Lumbar	52	Hip joint/shoulder joint
53	Cleido-occipitalis; cleido-mastoideus	54	Orbicularis oculi
55	Tensor fascia latae	56	Radial
57	Extensor carpi radialis	58	Left ventricle
59	Peroneal ; tibial	60	Caudate nucleus; hippocampus
61	interventricular Foramen of Munro	62	Zygomatico-temperal ; trigeminal
63	Tentorium cerebelli	64	Brachium conjunctivum
65	Vagus	66	Ophthalmic; maxillary
67	Auditory or Acoustic or Vestibulocochlear	68	Musculocutaneous
69	lat. cutaneous femoral, femoral and obturator	70	Tibial
71	Stellate	72	Musculi pectinati
73	Left auricle	74	Brachial
75	Portal vein	76	Coeliac artery
77	Utero ovarian artery	78	Internal pudendal artery
79	Cisterna chili; thoracic duct	80	Hard palate
81	Mesentery	82	Nasal septum
83	Eustachean tube	84	Cytoplasm and Nucleus
85	Ovum/neuron	86	Perichondrium
87	Osteoblasts	88	Epithelium
89	Tunica intima, tunica media; tunica adventitia	90	Lysosomes
91	Red; yellow marrow	92	Umbilical cord
93	Mesoderm; entoderm	94	Archenteron
95	Maxillary; mandibular processes	96	Sabre
97	Lateral malleolus	98	Canine

99	Fabella	100	Canalis transversarium
101	Supraglenoid tubercle	102	Transversus thoracis
103	Ball and socket/shoulder/hip joint	104	Cochlea tibii
105	Costocervical trunk, superficial cervical; internal thoracic arteries	106	Cranial, caudal, medial and lateral; Axillary, ulnar, musculocutaneous and radial
107	Tibial; Fibular	108	External, Middle and Internal
109	Oculomotor, glossopharyngeal; facial	110	Median and musculocutaneous
111	Suprascapular	112	Cranial interosseous
113	Triceps brachii	114	Caudal epigastric; external pudendal
115	Quadriceps femoris	116	Obturator
117	Median	118	Dorsal scapular, deep cervical, supreme intercostal and vertebral arteries.
119	Long thoracic	120	Subclavian
121	Dorsal buccal, Ventral buccal and Auriculopalpebral	122	External carotid
123	Arytenoid	124	Syrinx
125	Horse	126	Adrenal gland
127	Ox	128	Area cribrosa
129	Pars bulbous glandis & Pars longa glandis.	130	Clitoris
131	Wharton's	132	Canine
133	Pancreas	134	Torus pyloricus
135	Gastroepiploic foramen	136	Dog
137	Apical bronchus	138	Body ; disseminate part
139	Porcine	140	Cat (Feline)
141	Os cordis	142	Endochondral
143	Acromion process	144	Mandible
145	Furcula	146	Tibiotarsus
147	Dog	148	Xiphoid
149	Pronation	150	Hyperextension
151	Superior check ligament	152	F. triosseum
153	Canine	154	Dens
155	Dorsal spine	156	Tubercular facet; thoracic
157	Nuchal crest	158	Nasal & Palatine
159	Coronary sinus	160	Subclavian
161	Internal thoracic	162	Transverse
163	Subscapular	164	greater
165	median	166	femoral
167	dog	168	Scrotal
169	Caudal mediastinal	170	Trochlea
171	Acetabulum	172	styloid process
173	Ulna of horse	174	horse
175	uncinate process	176	cariniform cartilage
177	Sacrum	178	Adduction
179	Round ligament	180	Odontoid ligament

181	Palatoglossal & Palatopharyngeal	182	4th cervical
183	Omasal groove	184	Sternal flexure
185	Hepatic duct; Major pancreatic duct	186	Trigonum vesicae
187	Suburethral diverticulum	188	canine
189	Uterus masculinus	190	Axial; appendicular
191	Os penis	192	Axis
193	triosseal	194	Diaphragm
195	Biceps brachii	196	Os navicularis
197	Ball and Socket joint	198	Caudal cutaneous antibrachial
199	infraorbital	200	Olfactory
201	Foramen ovale	202	internal pudental; caudal gluteala
203	Papilla salivalis	204	Incisive papilla
205	Cardia	206	Syrinx
207	Supraglenoid; Biceps brachii	208	radial
209	Accessory carpal	210	anconeal process
211	extensor process	212	Sacral surface; Iliac surface
213	Supracondyloid fossa; superficial flexor	214	tuberosity
215	6th cervical Vertebra	216	musculocutaneous
217	Axillary	218	Radial
219	Cranial gluteal	220	internal iliac
221	Conus medullaris	222	Dorsal root ganglion
223	3rd and 4th cheek	224	Sacculations; muscular bands
225	bovine and swine	226	ectoderm
227	Intercellular junctions	228	gelatinous/mucous connective tissue; mesenchyme
229	Sertoli cells	230	Peyer's patches
231	Nissl bodies/Tigroid bodies	232	Nodes of Ranveir.
233	Myoepithelial cells	234	Corpus cavernosum penis
235	Endometrial glands	236	Serous demilunes
237	stratified squamous	238	Crypts of Leiberkuhn
239	Cleavage	240	Islets of Langerhans
241	Herring bodies	242	Corpus haemorrhagicum
243	mesoderm	244	H & E
245	Brunner's glands	246	Colloid
247	Kupffer cells	248	Periosteum
249	Leydig cells	250	L. epithelialis, L. propria & Muscularis mucosa
251	Mitochondria organelle	252	Megakaryocytes
253	mammals	254	Astrocytes
255	0.2 µm	256	Euchromatin
257	Testis/ovary	258	I ; H
259	Mast cell	260	Microglia
261	Band cell	262	fungiform
263	Fat ; striated muscle	264	Microvilli
265	Liver acinus	266	pig
267	Allantois	268	Imperforate anus

269	**1000**	270	**Sarcoplasmic reticulum**
271	**Epineurium**	272	**fibroblasts**
273	**Tubuloalveolar; apocrine**	274	**pseudostratified ciliated columnar**
275	**preformation theory**	276	**Isolecithal ; holoblastic**
277	**yolk sac ; allantois**	278	**primitive streak**
279	**epaxial muscles; hypaxial**		

III. State true or False

1. Urinary bladder is absent in fowl.
2. Cowper's gland is located on the urethra at the ischial arch in dogs.
3. Honey comb appearance is seen in the interior of the reticulum of sheep.
4. Sacculus rotundus is the dialated terminal part of the ileum in rabbit.
5. The tip of the epiglottis is pointed in horse.
6. Ovaries are concealed in a peritoneal pouch called ovarian bursa in sow.
7. Scapula is an example for long bone.
8. Elbow joint is a composite joint.
9. Fibula is rudimentary in ox.
10. Deltoid tuberosity is present in femur.
11. Acetabulam is perforated in fowl.
12. Dorsal spinous process is well developed in the cervical vertebra.
13. Atlas is the 2nd cervical vertebra)
14. There are 14 cervical vertebrae present in fowl.
15. Soleus is a vestigial muscle of hind limb.
16. Longissimus dorsi is the longest muscle in cattle.
17. Phrenic nerve supplies the diaphragm.
18. Sesamoidean ligament is absent in ox.
19. Soft palate is extensive in horse.
20. Carancula sublingualis is located at the level of upper 5th cheek tooth in ox.
21. Interior of rumen resembles the honey comb structure.
22. Colon of ox has muscular bands.
23. Spleen is present on the left side of thoracic cavity.
24. Diaphragm is absent in fowl.
25. Kidneys of the pig are lobulated.
26. Nasal cavity is completely divided into two halves throughout its length.
27. False nostril is present in dog.
28. Canine teeth are present in mare.
29. Bicornuate uterus is present in cow.
30. Urethral process is present in the penis of sheep.
31. Mitochondria are the power house of the cell.
32. Kinetic cilia are motile cilia.
33. Nucleoli are absent in glial cells.
34. Epithelium is avascular.
35. Smooth muscle fibres show striations.
36. Intercalated discs are present in skeletal muscle.
37. Small intestine is lined by cuboidal epithelium.
38. Oesophagus is lined by simple columnar epithelium.
39. Epiglottis is an example for elastic cartilage.
40. Lamina subglandularis is present in the stomach of dog.

41. Signet ring shaped cells are present in reticular tissue.
42. Polkisson cells are present in the parenchyma of liver.
43. Vagina is lined by ciliated columnar epithelium.
44. Spermatozoa carry diploid chromosomes.
45. Teratology is the study of malformations.
46. Zona pellucida is an acellular glycoprotein membrane.
47. Total cleavage is otherwise called as holoblastic cleavage.
48. In amphioxus, gastrulation occurs by invagination.
49. The acromion process gives origin to deltoideus muscle in the horse.
50. The musculospiral grove lodges the brachialis muscle in the ox.
51. The last thoracic vertebra presents well developed capitular facet on its caudal extremity.
52. The fibula of the horse is short and does not extend upto the distal extremity.
53. The tuber ischii is trifid in the horse.
54. The masseteric fossa is well defined in the dog.
55. The hyoid bone supports both the tongue and larynx in the ox.
56. The stifle joint is described as ginglymus joint.
57. The diaphragm is a powerful expiratory muscle.
58. Synarthrosis is a freely movable joint.
59. Symphysis pelvis is an example of amphiarthrosis.
60. Superior check ligament arises from the metacarpal bone in the horse.
61. Radial carpal of the fowl is quadrilateral in shape.
62. Mamillary process is present between transverse process and caudal articular process.
63. Frontal sinus is the largest in the horse.
64. Axillary nerve supplies subscapularis muscle.
65. Sciatic nerve is formed by branches of last lumbar and first two sacral nerves.
66. Ganglion impar is the terminal ganglion of the sympathetic nervous system.
67. Genitofemoral nerve passes through the inguinal canal.
68. Deep circumflex iliac artery supplies lateral abdominal muscles.
69. Thalamus is a large sensory nucleus of diencephalons.
70. Auriculopalpebral nerve supplies orbicularis oculi.
71. Rumen is supplied mainly by the left ruminal artery.
72. Lips are the organs of prehension in the bovine.
73. Lyssa is a characteristic feature of tongue of dog.
74. Reticular groove is functional in the suckling calves.
75. Papilla salivalis carries the opening of the Stenson's duct.
76. Pharyngeal tonsils are well developed in the dog.
77. Laryngeal saccules are absent in the horse.
78. Trachea bifurcates at the level of V rib in the ox.
79. Gall bladder stores the bile in the horse.
80. Abomasum lies on the abdominal floor in the xiphoid region.
81. The deep branch of the radial nerve supplies the flexors of carpus and digits.
82. The deep brachial artery is a branch of median artery.
83. The ulnar nerve supplies dorsolateral aspect of the IV functional digit in ox.
84. The internal pudendal artery is a branch of urogenital artery in the male.
85. The caudal cutaneous sural nerve is a branch of tibial nerve in ox.
86. The deep circumflex iliac artery supplies the adductor muscles of thigh.
87. The stellate ganglion is located medial to the vertebral end of last rib on longus colli muscle.

88. The right coronary artery is dominant in the ox.
89. The zygomaticotemporal nerve gives of the cornual nerve in the ox.
90. The cranial cervical ganglion is located in the head region.
91. Small metacarpals of horse are the examples of aborted long bones.
92. The cariniform cartilage is the characteristic feature of sternum of horse.
93. Pygostyle represents the fusion of last few cervical vertebrae of fowl.
94. Atlanto-occipital joint is an example of ginglymus.
95. The nucleus pulposus occupies the peripheral part of intervertebral disc.
96. The intercentral articulations are between the bodies of thoracic vertebrae.
97. The extensor carpi radialis is the anterior most muscle in the dorsum of forearm.
98. Chevron bones are the characteristic features of caudal vertebrae of fowl.
99. The action of gracilis muscle is to abduct the hind limb.
100. The direction of the muscle fibres in obliquus abdominis internus is forwards and downwards.
101. The rostral belly of digastricus attaches to angle of mandible.
102. Phrenic nerve is formed by the ventral branches of C_6, C_7 and C_8 spinal nerves.
103. The ulnar nerve passes caudal to median nerve in the distal aspect of humerus in ox.
104. Cranial cutaneous antebrachial nerve is a branch of axillary nerve.
105. Radial nerve supplies the flexors of carpus and digits.
106. Musculocutaneous nerves innervates the distal aspect of manus.
107. Cisternal magna is chosen for collection of CSF.
108. Olfactory nerve fibres pass through the cribriform plate of ethmoid.
109. Oculomotor nerve innervates levator palpabrae superioris.
110. Corpus callosum is an example of association fibres.
111. The infratrochlear nerve innervates the medial part of upper eyelid.
112. Subscapular artery is a branch of axillary artery.
113. Cranial gluteal nerve supplies adductor muscle.
114. Radial artery is a branch of suprascapular artery.
115. External pudendal artery is a branch of deep femoral artery.
116. Caudal gluteal artery gives off caudal uterine artery in the female.
117. Saphenous nerve is a branch of lateral cutaneous femoral nerve.
118. Ventral coccygeal artery is chosen for taking pulse in ox.
119. Recurrent laryngeal nerve is given off at the level of arch of aorta from the vagus on the right side.
120. The subcutaneous abdominal vein drains the blood from the caudal aspect of udder.
121. The vena hemiazygos vein joins the great cardiac vein and opens into the coronary sinus.
122. The auriculopalpebral nerve supplies orbicularis oculi muscle.
123. Coracoid process is absent in dog.
124. Acromian process is present in horse.
125. Supratrochlear foramen is present in pig and dog.
126. The facets at the carpal articular surface at the distal end of radius are oblique in horse.
127. Obturator foramen is formed by ilium and pubis in fowl.
128. The third trochanter of femur is absent in pig and dog.
129. A single occipital condyle is a feature of fowl.
130. Fovea dentis is a depression at the cranial part of the floor of the axis.
131. Annulus fibrosus occupies the peripheral part of the intervertebral disc.

132. Oculomotor nerve supplies the medial rectus, ventral rectus and dorsal oblique eye muscles only.
133. Pectinate muscles are present in the wall of the ventricle.
134. The facial nerve passes through the stylomastoid foramen and divides into auriculopalpebral, dorsal buccal and ventral buccal nerves.
135. Femoral artery is used to take pulse rate in the dog.
136. The preganglionic fibres associated with sympathetic division of the autonomic nervous system are components of the thoraco-lumbar spinal nerves.
137. Portal vein drains from the liver while hepatic veins drain into the liver parenchyma..
138. Cephalic vein is used for intravenous injections in dog.
139. Bulbourethral glands are always present in dogs.
140. Sigmoid flexure is absent in boar.
141. Colliculus seminalis is a small elongated or oval eminence at the midline on the dorsal wall of the pelvic urethra)
142. The apex of each pleural sac is known as cupula.
143. In pig the bile duct opens at a papilla on the duodenum about 3 cm from the pylorus.
144. Guttural pouches are diverticula of Eustachian tubes in horse.
145. The last pair of ribs in the horse are called floating ribs.
146. Chevron bones are described in the coccygeal vertebrae of dog.
147. The movement of an extremity towards the median plane is called adduction.
148. The direction of m. obliquus abdominis internus is downwards and backwards.
149. The funicular part of ligamentum nuchae is inserted to internal occipital protuberance.
150. The foramen incisivum is described in the premaxilla of horse.
151. The deep circumflex iliac artery is a branch of external iliac artery and supplies lateral abdominal muscles.
152. The common interosseus artery is a branch of brachial artery.
153. The tensor fascia antebrachii is innervated by axillary nerve.
154. The external pudendal artery supplies the mammary gland in the cow.
155. The septomarginal trabeculae of the heart arises from right auricle to the left auricle.
156. The dura mater is divided into endosteal and meningeal layers in vertebral canal.
157. The superficial cervical artery traverses in the canalis transversarius.
158. The cecum of the horse is described as comma shaped)
159. In the horse testes are placed vertical to the long axis of the body.
160. The right medial lobe of liver is divided into quadrate and right medial proper lobe in dog.
161. The mediastinum is the space described between parietal and visceral pleura.
162. The oesophageal groove opens into the abomasum in cow.
163. The broad ligaments attach the vagina to the walls of pelvic cavity.
164. The tunica vaginalis is that part of the peritoneum surrounding spermatic cord.
165. The spleen of the horse is sickle shaped.
166. Reticulocytes are the immature red blood cells.
167. Reduction in number of chromosomes occur in 2^{nd} meiotic division.
168. Heterochromatin is found in sperm head.
169. Neurohypophysis secretes posterior pituitary hormones.
170. Chief cells secrete hydrochloric acid in stomach.
171. Myenteric plexus contain parasympathetic post ganglionic neurons.

III

1. Hiatus aorticus	a) Lateral angle ilium
2. Quadriceps femoris	b) Complex muscle
3. Tensor fasciae latae	c) Second phalanx
4. Peroneus tertius	d) Trochanteric fossa
5. Insertion of soleus	e) Diaphragm
6. Superficial digital flexor	f) Vastus medialis
7. Gemellus	g) Anconeus
8. Raises capsule of elbow joint	h) Longest muscle in the body
9. Longissimus dorsi	i) Extensor fossa
10. Complex muscle origin	j) Lateral head of Gastrocnemius
11. Capitular facet	k) Humerus of fowl
12. Pneumatic bone	l) Thoracic cavity

Ans: **1. e** **2. f** **3. a** **4. b** **5. j** **6. c** **7. d**
8. g **9. h** **10. i** **11. l** **12. k**

IV

1. Umbilical artery	a) Right atrio-ventricular orifice
2. Subscapular artery	b) Canalis transversarium
3. Mitral valve	c) Anterior tibial artery
4. Popliteal artery	d) Ligamentum arteriosum
5. Tricuspid valve	e) Thoracodorsal artery
6. Vertebral artery	f) Left atrio-ventricular orifice
7. Ductus arteriosus	g) Thoracic duct
8. Rete mirabile cerebri	h) Subcutaneous abdominal vein
9. Left tracheal duct	i) Basilar artery
10. Milk vein	j) Round ligament of urinary bladder
11. Base of the brain	k) External pudic vein
12. Udder	l) Emergent artery

Ans: **1. j** **2. e** **3. f** **4. c** **5. a** **6. b** **7. d**
8. l **9. g** **10. h** **11. i** **12. k**

172. Intercellular canaliculi form the initial part of duct system in liver.
173. Penicillar arteries are described in the spleen.
174. Osteoclasts are bone eating cells.
175. The chromosomal number is halved during 1st meiotic division in spermatogenesis.
176. Megakaryocytes are the source of monocytes in the bone marrow.
177. In brown adipose tissue nucleus retains its central position.
178. Dust cells are the air conducting cells in the alveoli of the lungs.
179. The true respiratory system presents the cartilaginous plates in its walls.
180. The brush border is the characteristic feature of proximal convoluted tubules of the kidney.
181. Sertoli cells are present in the interstitial connective tissue of the testis.
182. Cumulus oophorus supports the developing ovum in the developing follicle.
183. The ameloblasts secrete dentin of the teeth.
184. Amnion and chorion arise by the foldings of the extraembryonic somatopleurae.
185. The first pharyngeal pouch differentiates into Eustachian tube and the middle ear.
186. The dorsal portions of the III and IV pharyngeal pouches are the primordia for parathyroid glands.
187. During the development of the stomach dorsal border grows faster forming the dorsal curvature.
188. Situs inversus is a condition wherein during development organs are found in opposite situations.
189. The liver develops as a ventral diverticulum of the ectodermal epithelium the posterior part of the foregut.
190. The failure of dilatation of alveoli of lungs is due to the absence of surfactant.
191. The ureteric primordium arises as a hollow outgrowth of the mesonephric duct.
192. The Wolffian ducts give rise to uterus in the female.
193. The first site of blood formation is the area vasculosa in the wall of the yolk sac.
194. During development first and second aortic arches degenerate.
195. Tendon is a dense irregularly arranged connective tissue.
196. Intercalated discs are present in skeletal muscles.
197. Unilocular fat droplets are found in brown adipose tissue.
198. The plasma cell has got an eccentrically placed nucleus which has chromatin material arranged in a cart wheel shape.
199. Hepatic cells have got great regenerative capacity.
200. The endoderm is formed by delamination.
201. Myocoel is a cavity of the myotome.
202. The chorio-vitelline placenta involves the yolk sac and chorion.
203. Pleural cavity is part of the intraembryonic coelom.
204. Ovulation is spontaneous in cat.

KEY ANSWERS

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
T	F	T	T	T	T	F	T	T	F	T	F	F	T	T
16	17	18	19	20	21	22	23	24	25	26	27	28	29	30
T	T	F	T	F	F	F	F	T	F	F	F	F	T	T
31	32	33	34	35	36	37	38	39	40	41	42	43	44	45
T	T	T	T	F	F	F	F	T	T	F	F	F	F	T

46	47	48	49	50	51	52	53	54	55	56	57	58	59	60
T	T	T	F	T	F	T	F	T	T	T	F	F	T	F
61	62	63	64	65	66	67	68	69	70	71	72	73	74	75
T	F	F	F	T	T	T	T	T	T	T	F	T	T	T
76	77	78	79	80	81	82	83	84	85	86	87	88	89	90
T	F	T	F	T	F	F	T	F	F	F	F	F	T	T
91	92	93	94	95	96	97	98	99	100	101	102	103	104	105
T	T	F	T	F	T	T	F	F	T	T	F	T	T	F
106	107	108	109	110	111	112	113	114	115	116	117	118	119	120
T	T	T	T	F	T	T	F	F	T	F	F	T	F	F
121	122	123	124	125	126	127	128	129	130	131	132	133	134	135
T	T	T	F	F	F	F	T	T	F	T	F	F	T	T
136	137	138	139	140	141	142	143	144	145	146	147	148	149	150
T	F	T	F	F	T	T	T	T	F	T	T	F	F	T
151	152	153	154	155	156	157	158	159	160	161	162	163	164	165
T	T	F	T	F	F	F	T	F	T	F	T	F	T	T
166	167	168	169	170	171	172	173	174	175	176	177	178	179	180
T	F	T	F	F	T	T	T	T	T	F	T	F	F	T
181	182	183	184	185	186	187	188	189	190	191	192	193	194	195
F	T	F	T	T	T	T	T	F	T	T	F	T	T	F
196	197	198	199	200	201	202	203	204						
F	F	T	T	T	F	T	T	F						

IV. Match the following

I

1. Guttural pouch
2. Pygostyle
3. Lyssa
4. Dental pad
5. os rostri
6. oyster shape spleen

a) sheep
b) dog
c) fowl
d) pig
e) horse
f) ox

Ans: 1. e 2. c 3. b 4. f 5. d 6. a

II

1. Right AV opening
2. Dorsal artery
3. Subcutaneous thoracic vein
4. Corpus callosum
5. Posterio haemmorroidal nerve
6. Dorsal interosseous artery
7. Anterior tibial artery
8. Trochlear nerve
9. Obturator nerve
10. Phrenic nerve
11. Ganglion impar
12. Collateral ganglia

a) Commisural fibres
b) Tricuspid valve
c) Radio-ulnar groove
d) Superior oblique
e) First intercostal artery
f) Lumbo-sacral plexus
g) Spur vein
h) Bilateral satellite vein
i) Cervical spinal nerves
j) Sacral plexus
k) Coeliac ganglion
l) Sympathetic ganglion

Ans: 1. b 2. e 3. g 4. a 5. j 6. c
7. h 8. d 9. f 10. i 11. l 12. k

	15
	T
	30
	T
	45
	T

V

1. Proventriculus	a) Lung
2. Choanae	b) Glandular stomach
3. Cupola of pleura	c) Nasal cavity
4. Suburethral diverticulum	d) Abomasum
5. Guttural pouch	e) Vulva
6. Falciform ligament	f) Common bile duct
7. Diverticulum duodeni	g) Liver
8. Carnassial tooth	h) Tongue of dog
9. Lyssa	i) Dog-premolar
10. Paired caeca	j) Uterus-goat
11. Caruncles	k) Fowl
12. Torus pyloricus	l) Eustachian tube

Ans: **1. b** **2. c** **3. a** **4. e** **5. l** **6. g** **7. f**
8. i **9. h** **10. k** **11. j** **12. d**

VI

1. Tendon cell	a) Proximal convoluted tubule
2. Cells of Betz	b) Internal ear
3. Herring body	c) Testis
4. Brush border	d) Inclusion
5. Leydig cell	e. Liver
6. Kupffer cell	f. Pituitary
7. Glycogen	g. Cerebrum
8. Simple squamous	h. Mesoderm
9. Cochlear duct	i. Fibroblast
10. Kidney	j. Blood vessel

Ans: **1. i** **2. g** **3. f** **4. a** **5. c**
6. e **7. d** **8. j** **9. b** **10. h**

VII

1. Utricle and saccule	a) Auditory ossicle
2. Tapetum lucidum	b) Spinal cord
3. Optic papilla	c) Maintenance of body balance
4. Scala tympani	d) Iris
5. Os lenticularis	e) Communicates lateral and III ventricle of brain
6. Corpora nigra	f) Choroid of eye
7. Foramen of Munro	g) Rostral colliculus
8. Gracile fascicle	h) Blind spot
9. Choroid plexus	i) Ventricles of brain
10. Mesencephalon	j) Cochlea of internal ear

Ans:	**1. c**	**2. f**	**3. h**	**4. j**	**5. a**
	6. d	**7. e**	**8. b**	**9. i**	**10. g**

VIII

1. Eustachian tube	a) Foramen of Winslow
2. Trigonum vesicae	b) Spleen of dog
3. Caruncula sublingualis	c) Kidney of ox
4. Coprodeum	d) Colon of ox
5. Epiploic foramen	e) Found in mare
6. Socks shaped	f) Opens into pharynx
7. Ansa spiralis	g) Urinary bladder
8. Ansa sigmoidea	h) Auditory ossicle of fowl
9. Major calyx	i) Opens into right lung ox
10. Ovulation fossa	j) Opening of colon into cloaca
11. Columella	k) Duodenum of ox
12. Apical bronchus	l) Wharton's duct

Ans:	**1. f**	**2. g**	**3. l**	**4. j**	**5. a**	**6. b**
	7. d	**8. k**	**9. c**	**10. e**	**11. h**	**12. i**

IX

1. Cubital joint	a) Atlantoaxial joint
2. Tuber scapulae	b) Stifle joint
3. Lateral masses	c) Frontal sinus
4. Trochoid	d) Caudal vertebrae of dog
5. Menisci	e) Biceps brachii
6. Buttons of splints	f) Elbow joint
7. Sella turcica	g) Ethmoid bones
8. Cornual diverticulum	h) Calcar
9. Capitular facet	i) Premaxilla
10. Chevron bones	j) Hypophyseal fossa
11. Spur	k) Thoracic vertebrae
12. Incisive foramen	l) Small metacarpals of horse

Ans:	**1. f**	**2. e**	**3. g**	**4. a**	**5. b**	**6. l**
	7. j	**8. c**	**9. k**	**10. d**	**11. h**	**12. i**

X

1. Ramus collateralis	a) Vagus
2. Cauda equina	b) Sympathetic Nervous system
3. Hypothalamus	c) Trochlear nerve
4. Sylvian fissure	d) Caudal spinal nerves
5. Crista terminalis	e) Diencephalon
6. Recurrent laryngeal nerve	f) Cranial mesenteric artery
7. Ganglion impar	g) Middle cerebral artery
8. Superior oblique muscle of eye	h) Pectinate muscle

Ans: 1. f 2. d 3. e 4. g
5. h 6. a 7. b 8. c

XI

1. Pigment cell	a) Conducting system
2. Hair follicle	b) Effector
3. Body of the tongue	c) Thymus
4. Neural tube	d) Tuberculum impar
5. Bronchi	e) Flattened nuclei
6. Pituitary	f) Sertoli cells
7. Root of the tongue	g) Peripheral nervous system
8. Alveoli	h) Enterochromaffin cells
9. Subcutis	i) Dog
10. Beta cells	j) Copula
11. Gall bladder	k) Melanocyte
12. Neural crest	l) Arrectores pilorum muscle
13. Alpha cells	m) Cartilage plates
14. Anal sacs	n) Columnar epithelium
15. Argentaffin cells	o) Central nervous system
16. Testis	p) Panniculus adiposus
17. Purkinje fibers	q) Glucagon
18. Mucous cell	r) Herring bodies
19. Hassalls corpuscle	s) Simple squamous epithelium
20. Motor end plate	t) Insulin

Ans: 1. k 2. l 3. d 4. o 5. m 6. r 7. j 8. s 9. p 10. t
11. n 12. g 13. q 14. i 15. h 16. f 17. a 18. e 19. c 20. b

XII

1. Melanocyte	a) Distal convoluted tubule
2. Ellipsoid	b) Effector
3. Body of the tongue	c) Thymus
4. Neural tube	d) Tuberculum impar
5. Bronchi	e) Unicellular gland
6. Nissil granules	f) Small intestine
7. Root of the tongue	g) Peripheral nervous system
8. Alveoli	h) Enterochromaffin cells
9. Sebaceous gland	i) Dog
10. Podocytes	j) Copula
11. Haversian canal	k) Pigment cell
12. Neural crest	l) Spleen
13. Kupffer cell	m) Cartilage plates
14. Anal sacs	n) Compact bone
15. Argentaffin cells	o) Central nervous system
16. Microvilli	p) Holocrine gland
17. Macula densa	q) Reticuo endothelial system
18. Goblet cell	r) Neuron
19. Hassall's corpuscle	s) Simple squamous epithelium
20. Motor end plate	t) Bowmans capsule

Ans: **1. k 2. l 3. d 4. o 5. m 6. r 7. j 8. s 9. p 10. t**
11. n 12. g 13. q 14. i 15. h 16. f 17. a 18. e 19. c 20. b

XIII

1. Collagen fiber	a) Dust cell
2. Microvilli	b) Synthesize RNA
3. Syndesmochorial placenta	c) Maxillary artery
4. Endotheliochorial	d) Anisotropic
5. Pneumocyte	e) Stapedial & hyoid artery
6. I aortic arch	f) Increases absorptive surface of the cell
7. Vasa vasorum	g) Thin walled vessels
8. II aortic arch	h) Ruminants (cow)
9. Sinusoids	i) Bitch
10. Nucleolus	j) Blood vessels in tunics of blood vessels

Ans: **1. d 2. f 3. h 4. i 5. a**
6. c 7. j 8. e 9. g 10. b

CHAPTER 7
VETERINARY PATHOLOGY

I. Select the correct answer:

1. Thyrosin is essential for the synthesis of
   a) Melanin
   b) Thyroxine
   c) Adrenalin
   d) All

2. Example for epithelial hyaline is
   a) Corpora amylaceae
   b) Cell nests in Squcc
   c) Renal casts
   d) All

3. Blister is an example for the type of degeneration is
   a) Cloudy swelling
   b) Hydropic
   c) Myxomatous
   d) None of the above

4. In tuberculosis, the type of giant cells seen in tissues are
   a) Langhans giant cells
   b) Reed steinberg giant cells
   c) Tumor giant cells
   d) None

5. The term used to indicate alteration in the size, shape and orientation of adult cells is
   a) Dysplasia
   b) Metaplasia
   c) Hyperplasia
   d) None

6. Gangrene of the extremities occurs due to
   a) Frost bite
   b) Arteriosclerosis
   c) Ergot poisoning
   d) All the above

7. Less vascular changes with more cellular phenomena is seen in
   a) Acute inflammation
   b) Chronic inflammation
   c) Both
   d) None of the above

8. The stain that can be used to demonstrate fat
   a) Oil red
   b) Sudan IV
   c) Osmic acid
   d) All the above

9. Pearl's stain is used for demonstration of
   a) Hematoidin
   b) Hemobilirubin
   c) Hemosiderin
   d) Histamin

10. Inflammation in rectum is termed as
   a) Proctitis
   b) Typhilitis
   c) Enteritis
   d) None of the above

11. Epithelial crescents in glomeruli are present in
   a) Subacute glomerulo nephritis
   b) Acute glomerulo nephritis
   c) Acute interstitial nephritis
   d) Chronic glomerulo nephritis

12. Relative polcythemia is seen in
a) Vomition
b) Excessive sweating
c) Dehydration
d) All the above

13. Which of the following protozoal disease causes hemorrhagic anemia
a) Coccidiosis
b) Babesiosis
c) Trypanosomiasis
d) Theleriasis

14. Inflammation of gray matter in brain
a) Polio encephalitis
b) Poliomyelitis
c) Pachymeningitis
d) Polio encephalomyelitis

15. Very great dilatation of heart known as
a) Cor pulmonale
b) Cor bovinum
c) Corrugosum of heart
d) None of the above

16. Smudge cells are
a) Ruptured neutrophilis
b) Ruptured monocyte
c) Ruptured lymphocytes
d) Ruptured eosinophils

17. The most common type of necrosis in brain is
a) Coagulative
b) Liquefactive
c) Both
d) None of the above

18. Vitamin A deficiency results into
a) Internal hydrocephalus
b) Encephalocele
c) External hydrocephalus
d) None of the above

19. Calcium deficiency in young ones leads to
a) Osteomalacia
b) Rickets
c) Osteoporosis
d) All the above

20. Excess production of growth hormone results into
a) Gigantism
b) Acromegaly
c) Both
d) None of the above

21. Corpora amylacea is an example of
a) Muscle hyaline
b) Connective tissue hyaline
c) Epithelial hyaline
d) None of the above

22. Hypertrophy is
a) Increase in size of the tissue with increase in size of cells
b) Decrease in size of the tissue after it has attained its full growth
c) Failure of an organ to develop
d) Decrease in the size of an organ

23. Best carmine is used to detect
a) Haemosiderin
b) Glycogen
c) Calcium
d) Bilirubin

24. The type of degeneration seen in collagen disease is
a) Fatty change
b) Mucoid
c) Fibrinoid
d) Mucinous

25. In Caisson's disease, the type of emboli encountered is
a) Fat
b) Air
c) Amniotic
d) Tumour

26. Amyloidosis is common in horses
a) Used for frequent racing
b) Used for frequent draft purposes
c) Used for antitoxin production
d) Infested with strongyle worms

27. In birds, gout may occur due to
a) Vitamin A deficiency
b) High protein diet
c) Renal disorders
d) All of the above

28. Freezing and frost bite produce gangrene by
a) Causing emboli and blocking the blood vessel
b) Causing thrombi and blocking the blood vessel
c) Facilitating growth of saprophytes
d) None of the above

29. Wear and Tear pigments are
a) Haemoglobin derivatives
b) Lipochromes
c) Exogenous pigments
d) None of the above

30. Chronic venous congestion of liver produces
a) Nutmeg liver
b) Centrilobular necrosis
c) Generalised oedema
d) All of the above

31. The counter part of neutrophils in fowls is
a) Plasma cell
b) Lymphocyte
c) Monocyte
d) Heterophil

32. A circumscribed cavity in the epidermis with pus is called
a) Furuncle
b) Pustule
c) Papule
d) Ulcer

33. Cellular swelling occurs due to
a) Failure of sodium pump in the cells
b) Increased ATP production
c) Calcium influx
d) Cell membrane damage

34. Amyloid is best demonstrateasd by
a) H & E
b) Congo red
c) Best carmine
d) Perl's stain

35. Onset of rigor mortis is slow in
a) Cold weather
b) Cachetic animals
c) Emaciated animals
d) All of the above

36. Clinically, prostate hyperplasia is evident by
a) Constipation
b) Difficulty in urination
c) Both of the above
d) None of the above

37. Hashimoto's disease is
a) Hypothyroidism
b) Nodular goiter
c) Hyperthyroidism
d) Autoimmune thyroiditis

38. The characteristic microscopic lesion seen in Listeriosis is
a) Non-suppurative meningo encephalomyelitis
b) Suppurative meningo encephalomyelitis
c) Lymphocytic meningo encephalomyelitis
d) Haemorrhagic meningo encephalomyelitis

39. Which among the following statements is not a feature of bronchopneumonia
a) The lesions are patchy in distribution
b) It is the commonest pneumonia of animals
c) The infection starts as bronchitis and bronchiolitis
d) It is otherwise known as lobar pneumonia

40. Congenital absence of spinal cord
a) Amyelia
b) Amelia
c) Acrania
d) Rachicele

41. Presence of epithelial casts in urine indicates
a) Acute nephritis
b) Chronic nephritis
c) Haemorrhage in kidney
d) Amyloidosis

42. Fracture with an opening on overlying skin is
a) Simple fracture
b) Compound fracture
c) Impacted fracture
d) Greenstick fracture

43. Osteocytes are
a) Bone producing mesodermal cells
b) The phagocytes of bone
c) The ordinary bone cells that cannot divide
d) None of the above

44. In osteoporosis the amount of blood calcium and phosphorus is
a) Increased
b) Decreased
c) Normal
d) None of the above

45. In pulmonic stenosis (a congenital anomaly of the heart), there is hypertrophy of
a) Right ventricle
b) Left ventricle
c) Right auricle
d) Left auricle

46. In animals suffering from cachectic diseases, the lesion seen over the heart is
a) Gelatinisation of fat of the pericardium
b) Petechial haemorrhages on the heart
c) Cardiac aneurysm
d) Cardiac tamponade

47. The type of anaemia noticed in animals suffering from osteodystrophies is
a) Aplastic anaemia
b) Haemorrhagic anaemia
c) Haemolytic anaemia
d) None of the above

48. The stage of pneumonia in which fibrin can clearly be seen is
a) Stage of congestion
b) Stage of red hepatization
c) Stage of grey hepatization
d) Stage of resolution

49. Periportal necrosis indicates
a) Necrosis of cells adjoining the portal tract
b) Necrosis of cells midway between the periphery and central vein
c) Necrosis of cells around the central vein
d) Necrosis of cells in the form of wedge shape

50. Charcot-Leyden crystals are seen in
a) Neutrophils
b) Lymphocytes
c) Monocytes
d) Eosinophils

51. Brooder Pneumonia is caused by
a) Bordertella
b) Mycobacterium tuberculosis
c) Aspergillus fumigatus
d) All of them

52. A tubercle nodule is nothing but
a) Granulation tissue
b) Granulomatous tissue
c) Fibrous tissue
d) None of them

53. Mastocytoma can be diagnosed by the following staining techniques
a) Methylene blue
b) Alcian blue
c) Toludine blue
d) By none of them

54. Braxy is caused by
a) Clostridium novyi
b) Clostridium perfringens
c) Clostridium septicum
d) By all of them

55. Strangles spreads
a) Through inhalation
b) By ingestion
c) Through wounds
d) By all of them

56. Blue tongue virus affects
a) Haemopoietic tissue
b) Vascular endothelium
c) Both of them
d) None of them

57. The other nomenclatures for Rabies are
a) Hydrophobia
b) Lyssa
c) Both of them
d) None of them

58. Babesiasis in cattle is characterized by
a) Haematuria
b) Haemoglobinuria
c) Both of them
d) None of the above

a) Rhinosporidium seeberi b) Schistsoma nasale
d) None of them

82. An infectious disease of birds with white spots on the liver and chalkiness of the pancreas
a) Avian monocytosis b) Avian mycoplasmosis
c) Pullorum disease d) Gumboro disease

83. Vandenberg reaction is biphasic in
a) Hmolytic Jaundice b) Toxic jaundice
c) Obstructin jaundice d) None

84. Deposition of carbon particles in lungs is called as
a) Siderosis b) Silicosis
c) Anthracosis d) None

85. Malignent tomour arising from striated muscle
a) Leiomyosarcoma b) Myosarcoma
c) Rabdomyosarcoma d) Rabdomyoma

86. Osmic acid is used to stain
a) Fat b) Glycogen
c) Starch d) None

87. " Cell nest" is a feature of
a) Papilloma b) Melanoma
c) Squamous cell carcinoma d) Mammary tumour

88. Chronic poisoining by lead is called as
a) Plumbism b) Siderosis
c) Chelosis d) None

89. Variation in the shape of RBCs is called as
a) Poikilocytosis b) Anisocytosis
c) Erythrocytosis d) Polycythemia

90. Rabies virus produces
a) Negri bodies b) Babe's nodules
c) Non suppurative encephalitis d) All the above

91. Nutritional roup in poultry is seen in deficiency of
a) Vitamin A b) Vitamin C
c) Thiamine d) Riboflavin

92. " Turkey egg" apparance of kidney is seen in
a) Hog cholera b) Swine erysepelas
c) Rinderpest d) Foot and mouth

93. "Zebra markings" are pathegnomonic for
a) Foot & Mouth b) Rinderpest
c) Theileriasis d) Blackquarter

59. Snoring disease is caused by
a) Rhinosporidium seeberi
b) Schistsoma nasale
c) Both of them
d) None of them

60. Which of the blood cell when present in tissues is called mast cell
a) Monocyte
b) Lymphocyte
c) Basophil
d) Giant cell

61. The mechanism by which the foreign body is transported through circulation is called
a) Thrombus
b) Embolism
c) Infarction
d) Necrosis

62. An aberration of connective tissue proliferation in which there is exuberant granulation tissue is known as
a) Granuloma
b) Proud flesh
c) Keloid
d) Re-epithelialisation

63. Localised dilatation of artery is known as
a) Atheroma
b) Arteriosclerosis
c) Aneurysm
d) Medial sclerosis

64. The stain used for the demonstration of Negri bodies is
a) Leishman's stain
b) PAS
c) H & E
d) Seller's stain

65. Sago spleen condition is seen in
a) Fatty degeneration
b) Hyaline degeneration
c) Amyloid degeneration
d) Gout

66. The process whereby acutely inflamed tissue return to their normal healthy, undamaged state is called
a) Hyperplasia
b) resolution
c) Organization
d) Granulation

67. The presence of minute, spherical basophilic bodies called LCL bodies in the tubular epithelium of the kidney usually indicated the disease
a) Psittacosis
b) Anaplasmosis
c) Haemobartenellosis
d) Eperythrozoonosis

68. The characteristic ulcers with central necrotic area surrounded by haemorrhagic zone in abomasum cattle are usually observed in
a) Trypanosomiasis
b) Babesiosis
c) Leishmaniasis
d) Theileriosis

69. An aphylactic atopic reactions are elicited by reaction of antigens with antibody to mast cells. The type of antibody involved is
a) IgG
b) IgM
c) IgA
d) IgE

70. A transient corneal opacity involving one or both eyes of some recovered dogs is seen in
a) Canine distemper
b) Rabies
c) Infectious canine hepatitis
d) Pseudorabies

71. Carbon tetrachloride poisoning leads to
a) Cloudy swelling in liver
b) Hydropic degeneration in liver
c) Fatty change in liver
d) None of these

72. Cattle living in plain areas when taken to hills above 7000 feet, develop
a) Caison's disease
b) Cori's diseasse
c) Anaemia & dyspnoea
d) Brisket disease & Polycythemia

73. Metastatic calcification occurs due to
a) Hyperglycaemia
b) Hyperlipidaemia
c) Hypercalcaemia
d) Hyperuricaemia

74. Multiple bone fractures lead quickly to
a) Gas embolism
b) Bone embolism
c) Fat embolism
d) Thrombotic embolism

75. Elementary bodies seen in the mononuclear cells of lungs in Chlamydiosis are called
a) Guarniery bodies
b) Kock's blue bodies
c) Negri bodies
d) LCL bodies

76. Multiple nodules of dull grey colour with a bluish material at the centre is seen in lungs of birds affected with
a) Asperigillosis
b) Aflatoxicosis
c) Coccidioidomycosis
d) Candidiasis

77. Disease in a week old chick with grayish white nodules in the lungs and saucer shaped lesions in airsacs
a) MD
b) Avian influenza
c) ILT
d) Brooder pneumonia

78. Enlarged haemorrhagic bursa, haemorrhages, on thigh and breast muscles are seen in
a) Marek's disease
b) Avian influenza
c) Ranikhet disease
d) Infectious bursal disease

79. Disease suspected in outbreaks in which animals die shortly after showing severe pruritis limited to a segment of the skin may be
a) Pox
b) Pseudorabies
c) Rabies
d) Malignant catarrhal fever

80. Soft and rubbery beak is due to deficiency of
a) Vitamin A
b) Vitamin E
c) Vitamin D
d) Vitamin K

81. Chemical mediators of inflammation act exclusively on
a) Arterioles
b) Venules
c) Capillaries
d) Arteries

94. Curled toe paralysis in poultry is due to the deficiency of
a) Thiamine
b) Riboflavin
c) Vitamin A
d) Vitamin E

95. In which disease we will get intra nuclear inclusion body
a) Rabies
b) Pox
c) ICH
d) Vaccinia

96. The toxin responsible for the nervous symptoms in tetanus
a) Hemolysin
b) Tetanospasmin
c) Fibrinolysin
d) All the three

97. Example for a wear and tear pigment
a) Hemosiderin
b) Melanin
c) Lipofuscin
d) Hematoidin

98. Inflammation of crop is called
a) Ingluvitis
b) Glossitis
c) Proventriculitis
d) Ventriculitis

99. Ascoli' thermo precipitation test is to detect
a) Anthrax
b) BQ
c) Leptospirosis
d) HS

100. Target organ of Aflatoxin is
a) Liver
b) Kidney
c) Brain
d) Pancreas

101. Acanthosis is thickening of
a) Stratum lucidum
b) Stratum granulosum
c) Stratum malpighii
d) Stratum germinativum

102. Type of necrosis seen in TB
a) Coagulative
b) Caseation
c) Liquifactive
d) None

103. Brooder pneumonia is an example for
a) Mycotoxicosis
b) Mycosis
c) Viral pneumonia
d) Verminous pneumonia

104. Type of inflammation seen in Tuberculosis
a) Chronic inflammation
b) Acute inflammation
c) Catarrhal inflammation
d) Liquifactive inflammation

105. Intra nuclear inclusion bodies are seen in
a) IBD
b) IB
c) ILT
d) In all the three

106. The mechanism by which the foreign body is transported through circulation is called
a) Thrombus
b) Embolism
c) Infarction
d) Necrosis

107. Caisson's disease is an example of
a) Air emboli
b) Fat emboli
c) Parasitic emboli
d) Bacterial emboli

108. Bottle jaw refers to
a) Actinomycosis
b) Actinobacillosis
c) Liver fluke infection
d) Tetanus

109. Squamous metaplasia of parotid duct occurs to deficiency of
a) Vitamin B1
b) Vitamin A
c) Vitamin C
d) Vitamin B6

110. Which of the following is not matching
a) Chondroma-Cartilage
b) Osteoma-Bone
c) Haemangioma-Blood vessels
d) Wart-Brain

111. Bronchiectasis means
a) Bronchial constriction
b) Bronchial dilatation
c) Bronchial obstruction
d) Absence of bronchi

112. Protrusion of abdominal organs through natural or artificial opening is called
a) Intussusception
b) Volvulus
c) Hernia
d) Prolapse

113. In perivascular cuffing following cells take part
a) Neutrophils
b) Lymphocytes
c) Monocytes
d) Mast cells

114. Osteodystrophia fibrosa is also known as
a) Bran disease
b) Big head disease
c) Miller's disease
d) All of these

115. Which of the following is not matching
a) Myxoedema-Hypothyroidism
b) Gigantism-Hypopitutarism
c) Diabetes inspidus-lack of ADH
d) Diabetes mellitus-Lack of insulin

116. Azoturia is the other name of
a) Monday morning disease
b) Osteofibrosa
c) White muscle disease
d) Stiff lamb disease

117. For Strau's test, which of the following animal is used?
a) Rabbit
b) Rat
c) Horse
d) Guineaping

118. Tigroid appearance of heart is seen in
a) Rinderpest
b) Swine fever
c) Mucoasal diseas
d) Foot and mouth disease

119. Canine distemper is otherwise called as
a) Hard pad disease
b) Hydrophobia
c) Rubarth disease
d) Circling disease

120. The diluting fluid that contains Glacial acetic acid and Gentian violet is used
a) RBC counting
b) WBC counting
c) Thrombocyte counting
d) Reticulocyte counting

121. If the packed cell volume is high it indicates
a) Polycythemia
b) Oligocythemia
c) Anemia
d) None of these

122. The Roleaux formation of RBC is normally high in
a) Cattle
b) Dog
c) Goat
d) Horse

123. "Programme cell death"or "Cell suicide" involving metabolism by the dying cells is called
a) Coagulation necrosis
b) Liquefactive necrosis
c) Caseous necrosis
d) Apoptosis

124. An attempt to estimate the degree of malignancy of a neoplasia based on histological criteria is known as
a) Grading
b) Staging
c) Differentiation
d) Pleomorphism

125. In malignant cells nuclear, cytoplasm ratio is
a) Increased
b) Decreased
c) Variable
d) Constant

126. "Bread and butter"pericarditis is characteristic of
a) Fibrinous inflammation
b) Serous inflammation
c) Suppurative inflammation
d) Catarrhal inflammation

127. Necrotising myositis is usually observed in
a) Black quarter
b) Actinomycosis
c) Glanders
d) Toxoplasmosis

128. Listeriosis in animals is most commonly characterized by
a) Non suppurative encephalitis
b) Suppurative encephalitis
c) Eosinophilic encephalitis
d) Fibrinous encephalitis

129. Canine distemper is characterized by
a) Cytoplasmic inclusions
b) Intranuclear inclusions
c) Cytoplasmic and intranuclear inclusions
d) Absence of inclusions

130. The condition in which iron dust is deposited in the tissues of the body is known as
a) Sillicosis b) Anthracosis
c) Siderosis d) Asbestosis

131. Pulpy kidney in lambs is caused by Clostridium perfringens
a) Type B b) Type C
c) Type D d) Type E

132. The lesions to tuberculosis are usually proliferative character and rarely exhibit caseation and Calcification in the species
a) Canine b) Equine
c) Bovine d) Swine

133. Tyzzer's disease is caused by
a) Bacillus subtilis b) Bacillus piliformis
c) Chlamydia psittaci d) Chlamydia trachometis

134. Clinical syndrome of cortisol (Cortisone) in excess is known as
a) Parkinson's disease b) Cushing disease
c) Diabetes insipidus d) Diabetes mellitus

135. Natural killer cells are a kind of
a) Lymphocytes b) Plasma cells
c) Macrophages d) Giant cells

136. Haemangioma is a tumour of
a) Blood cells b) Bone
c) Haematopoitic system d) None of these

137. Gout is primarily a disease of primates and poultry because
a) Both overfeed on protein diet b) Both suffer from vitamin A deficiency
c) They can synthesize such vitamins d) None of these

138. Rhabdomyosarcoma is a
a) Benign tumour of fibrous tissue b) Malignant tumour of fibrous tissue
c) Malignant tumour of smooth muscle d) None of these

139. Parenchymatous degeneration is also known as
a) Hyaline degeneration b) Mucinous degeneration
c) Glycogen infiltration d) Cloudy swelling

140. In Maedi, the characteristic microscopic lesion is
a) Presence of inclusion bodies
b) Presence of parasites
c) Presence of lymphoid follicles in the lung parenchyma
d) Adenomatosis of alveoli

141. Most important prerequisite for thrombosis is
a) Slowing of blood flow b) Change in the composition of blood
c) Increased number of platelets d) Injury to endothelium

142. Heart failure cells are
a) Degenerating myofibrils
b) Macrophages in the spleen
c) Haemosiderophages in the lungs
d) Kupffers cells

143. Epithelial pearl or cell nest is characteristic of
a) Basal cell carcinoma
b) Squamous cell carcinoma
c) Keratoacanthoma
d) Papilloma

144. "Mina mata disease" occurs due to
a) Salt poisoning
b) Mercury poisoning
c) Lead poisoning
d) None of these

145. Marek's disease in poultry can be differentiated from lymphoid leucosis by observing
a) Lymphocytes
b) Lymphoblasts
c) Plasma cells
d) Pleomorphic lymphoid cells

146. Black leg is caused by
a) Cl. Chauvoei
b) Cl.welchi
c) Cl. septicum
d) Cl. Novyi

147. Auto immune disease are caused by
a) Defect in CMI system
b) T cells deficiency
c) An immune response against self-antigen
d) A defect in thymus

148. Rinderpest virus has a particular affinity for
a) Lymphoid tissue
b) R.B.C.'s
c) Neurons
d) Both b & c

149. Eosinophilia occurs in
a) Asthma
b) Urticaria
c) Parasitic infection
d) All of these

150. Calcification in necrotic tissue is called
a) Metastatic calcification
b) Calceroid
c) Dystrophic calcification
d) Calcicosis

151. Exudative diathesis in birds is due the deficiency of
a) Vitamin E & Selenium
b) Vitamin A & Selenium
c) Vitamin D & Calcium
d) Vitamin K & Calcium

152. Cheesy exudates in the eyes of birds are seen in the deficiency of
a) Vitamin A
b) Vitamin E
c) Vitamin K
d) None of these

153. Star gazing in birds is due to the deficiency of
a) Pantothenic acid
b) Thiamine
c) Biotin
d) Riboflavin

154. Small grayish white granular eruptions in the comb, wattle, eyelids and mouth of a bird is seen in
a) Fowl plague
b) Fowl cholera
c) Fowl pox
d) Fowl typhoid

155. A highly infectious and contagious viral disease of birds affecting lymphoid elements
a) IB
b) IBD
c) I L T
d) R D

156. Icteric appearance of the carcass, hepatomagaly with dark red to brownish discolouration and the surface shows distinctive coppery bronze sheen
a) Fowl typhoid
b) Fowl cholera
c) Fowl plague
d) All of these

157. Turkish towel like appearance of the mucosa of crop
a) Thrush
b) Histoplasmosis
c) Ranikhet disease
d) Avian influenza

158. Linear streaks of haemorrhage, diphtheritic deposits in the mucosa of oesophagus, scattered erosions and ulcers in the gizzard, haemorrhage in the ileac-annular bands
a) Duck viral hepatitis
b) Duck viral enteritis
c) Fowl plague
d) Duck influenza

159. Intracytoplasmic inclusion bodies seen in the epithelial cells in Fowl pox are termed as
a) Dohle's bodies
b) Bollinger bodies
c) Heinz bodies
d) Howell jolly bodies

160. Petechiac and pin head sized greenish white nodules in different organs
a) BHD
b) IBD
c) RD
d) Fowl Pox

161. Mucopurulent excudate in the nares , fibrinopurulent exudate over pericardium, pleura, air sacs, hepatomegaly, marked enlargement of spleen and necrotic foci on its surface
a) Avian influenza
b) Infectious bronchitis
c) Ranikhet disease
d) Mycoplasmosis

162. Rabbits are very susceptible to infection with
a) E.coli
b) Pasteurella multicida
c) Salmonella typhimurium
d) Mycobacterium tuberculosis

163. Melena means
a) Blood in stools
b) Blood in urine
c) Blood in vomit
d) Blood in sputum

164. Parakeratosis in pigs occurs due to deficiency of
a) Manganese
b) Zinc
c) Iodine
d) Cobalt

165. Coenurus cerebralis is caused by
a) Echinococcus granulosus
b) Multiceps multiceps
c) Taenia saginata
d) Eimeria stidae

166. Farcy refers to
a) Lung glanders
b) Intestine glanders
c) Lymph gland glanders
d) Skin glanders

167. First Experimental Pathologist
a) Rudolf Virchow
b) Louis Pasteur
c) John hunter
d) Julius Cohnheim

168. Special stain for iron
a) Congo red
b) Osmic acid
c) Aluan blue
d) Prussian blue

169. Germ theory of disease was proposed by
a) Louis Pasteur
b) Robert Koch
c) Rudolf Virchow
d) Claudius Galen

170. Defeciency of ----------cause gout in poultry
a) Vita.C
b) Vit D
c) Vit.K
d) Vit.A

171. Bends is a condition due to
a) Thrombosis
b) Embolism
c) Chronic Venous congestion
d) Liquefactive Necrosis

172. Enlargement of tissue or organ due an increase in the number of cells is called
a) Hyperplasia
b) Hypertrophy
c) Metaplasia
d) Dysplasia

173. Earliest morphological evidence of cellular degeneration is
a) Fatty change
b) Cloudy swelling
c) Waxy degeneration
d) Fibrinoid degeneration

174. Thrombus attached to the wall of the heart and blood vessel is
a) Ball thrombus
b) Mural thrombus
c) Saddle thrombus
d) None of the above

175. Cattle with adult liver fluke infection show predominance of ---------- type of billirubin in blood
a) Conjugated
b) Unconjugated
c) Both a & b
d) None

176. Hydrostatic pressure at venular end of the capillary in mmHg
a) 45 into vein
b) 45 in to tissue
c) 30 in to vein
d) 15 in to tissue

177. The action all known mediators of inflammation is on
a) Arterioles only
b) Cappillaries only
c) Venules and small veins only
d) All the above

178. The vascular changes of inflammation were first reported by
a) William Harvey
b) Louis Pasteur
c) Julius Cohnheim
d) Xavier Bichat

179. One of them is not the sourse of vasoactive amines
a) Platelets
b) Mast cells
c) Eosinophils
d) Basophils

180. Nutmeg liver pattern is observed in the following condition
a) Acute general passive hyperaemia
b) Chronic general passive hyperaemia
c) Acute local passive hyperaemia
d) Amyloidosis

181. Corpora amylaceae are
a) Epithelial hyaline
b) Connective tissue hyaline
c) Muscle hyaline
d) Amyloidosis

182. The plasma derived chemical mediator system not activated by Hageman Factor
a) Kinin
b) Complement
c) Coagulation
d) Fibrinolytic

183. Abscess is an example for ---------- necrosis
a) Liquifactive
b) Caseous
c) Coagulative
d) Fat

184. Tuberculosis is an example for ---------- necrosis
a) Liquifactive
b) Caseous
c) Coagulative
d) Fat

185. Type of Gangrene seen in intestine is
a) Moist
b) Dry
c) Gas
d) All

186. Rigor mortis first occurs in
a) Limbs
b) Trunk
c) Head
d) Tail

187. Thrush breast heart is seen in
a) Hydropic degeneration
b) Hyaline change
c) Fatty change
d) Amyloidosis

188. Type of necrosis seen in CNS
a) Liquefactive
b) Caseous
c) Coagulative
d) Fat

189. Branch of Pathology used in Diagnosis of disease in Hospital at patients bedside
a) Comparative Pathology b) Experimental Pathology
c) Oncology d) Clinical Pathology

190. Metastatic calcification in kidney initiates with Ca deposits in
a) Mitochondria b) Basement membrane
c) Endothelial cells d) None

191. Ductus arteriosus connects
a) Pulmonary artery and pulmonary vein b) Pulmonary artery and aorta
c) Pulmonary vein and aorta d) None

192. Cardiac cirrhosis is a sequelae of
a) Right sided heart failure b) Left sided heart failure
c) Hepatic failure d) None

193. Which one is not a true Aneurysm
a) Fusiform aneurysm b) Saccular aneurysm
c) Dissecting aneurysm d) Cirsoid aneurysm

194. Inflammation of vein is called
a) Arteritis b) Phlebitis
c) Atherosclerosis d) None

195. Variation in shape of RBC in
a) Anisocytosis b) Polychromasia
c) Polycythemia d) Poikilocytosis

196. Replacement of Bone marrow by other tissue result in anemia is called
a) Hemolytic anemia b) Hemorrhagic anemia
c) Myelophthisic anemia d) Aplastic anemia

197. Neoplasic condition of lymphopoietic tissue with relatively normal blood picture is
a) Leukemoid reaction b) Aleukemic Leukemia
c) Lymphocytic Leukemia d) Reticulum cell sarcoma

198. Failure of alveoli to open and contain air is
a) Atlectasis b) Emphysema
c) Roaring d) None

199. Hepatisation of lung is seen in
a) Emphycema b) Atlectasis
c) Pneumonia d) None of the above

200. Commenest type of Pneumonia in animals
a) Necrotic Pneumonia b) Broncho Pneumonia
c) Lobar Pneumonia d) Interstitial Pneumonia

201. Pulmonary adenomatosis is seen in
a) Jaagsikte
b) Maebi
c) Pneumonia
d) None of the above

202. Inflammation of lips is called
a) Glossitis
b) Gingivitis
c) Chelitis
d) Lampas

203. A fibroblastic tumour occurring in gums is
a) Ewings tumour
b) Epulis
c) Papilloma
d) None of the above

204. The type of bloat which cannot be relieved by intubation is
a) Dry bloat
b) Froathy bloat
c) Both a & b
d) None of the above

205. Twisting of intestines on its axis
a) Torsion
b) Volvulus
c) Stenosis
d) Intususscception

206. Small granular contracted kidney is seen in
a) Interstitial nephritis
b) Glomerulo nephritis
c) Pyaemic nephrits
d) Tubular nephritis

207. Epithelial crescents is seen in
a) Interstitial nephritis
b) Glomerulo nephritis
c) Pyaemic nephrits
d) Tubular nephritis

208. Inflammation of the piamater is
a) Pachymeningitis
b) Leptomeningitis
c) Polyencephalitis
d) Poliomyelitis

209. Rabies is characterized by
a) Meningoencephalomyelitis
b) Intracytoplsmic inclusions
c) Lymphocytic inflammation of CNS
d) All the above

210. Pyometra is characterized by
a) Leukocytosis with shift to left
b) Leukocytosis with shift to right
c) Leukopenia with shift to left
d) Leukopenia with shift to right

211. Summer mastits is caused by
a) *Corynebacterium pyogens*
b) *E.coli*
c) *S.aureus*
d) *Streptococcus agalactiae*

212. Inflammation of the prepuce is
a) Balanitis
b) Posthitis
c) Vesiculitis
d) Phimosis

213. Condition known as adult rickets
a) Osteodystrophia
b) Osteoporosis
c) Osteomalacia
d) None of the above

214. Inflammation of the hip joint is
a) Coxitis
b) Gonitis
c) Arthritis
d) None of the above

215. Occulusions of the ducts of sweat glands give rise to
a) Sebaceous cyst
b) Sudoriferous cyst
c) Dermoid cyst
d) None of the above

216. Babes nodule in rabies is formed due to the collection of
a) Astrocytes
b) Oligodendroglia
c) Microglia
d) Ependymal cells

217. Punched out ulcer in abomassum is a pathgnomonic lesion of
a) Theileriasis
b) Rinderpest
c) Swine fever
d) Ancylostomiasis

218. The type of gangrene produced by clostridial organisms
a) Moist
b) Dry
c) Gas
d) All of these

219. Which of the following is not a tumor?
a) Fibroma
b) Adenoma
c) Keloid
d) Teratoma

220. Which of the following is true for all oncogenic RNA viruses?
a) Contain reverse transcriptase
b) Does not contain reverse transcriptase
c) These are retroviruses
d) Both a & c

221. Clay pipe appearance of bile duct is commonly seen in
a) Ascariasis
b) Trichinosis
c) Fascioliasis
d) Oesophagostomiasis

222. Fibrosarcoma, Osteosarcoma and Chondrosarcoma are examples of which of the following?
a) Epithelial benign tumor
b) Epithelial malignant tumor
c) Non epithelial malignant tumor
d) Non epithelial benign tumor

223. Abortion in late trimester in cattle is caused by
a) Brucella infection
b) Vibrio infection
c) BVD infection
d) Trichomonas infection

224. Mammary gland tumor is common in
a) Cow
b) Sheep
c) Dog
d) Pig

225. Blue tongue is transmitted by
a) Ticks
b) Mites
c) Flies
d) Culicoides

226. The *Bacillus anthracis* capsule contains
a) Glutamyl polypepltide
b) Lipopolysaccharide
c) Mycolic acid
d) Lipid-A

227. The toxin responsible for Pulpy kidney disease is
a) Alpha
b) Theta
c) Epsilon
d) Beta

228. Botriomycosis is caused by
a) *Staphylococcus aureus*
b) *S. epidermidis*
c) *S. intermedius*
d) *S. hyicus*

229. Strangles is caused by
a) *Streptococcus equisimilis*
b) *S. equinus*
c) *S. equi*
d) *S. uberis*

230. FMD virus replicates in the middle layer of
a) Stratum spinosum
b) Str.lucidum
c) Str.basale
d) None

231. In African Horse Sickness, the more pathogenic form is
a) Pulmonary
b) Cardiac
c) Mixed
d) Milder

232. Black Quarter affects cattle in the age group between
a) 6months to 2 yrs
b) 6month to 5yrs
c) Below 6months
d) None

233. The reservoir host in blue tongue
a) Cattle
b) Sheep
c) Goat
d) All

234. Leiomyoma is a benign tumor of----------muscle
a) Cardiac
b) Skeletal
c) Smooth
d) All

235. Basal Cell Carcinoma is also known as
a) Eye cancer
b) Jacob ulcers
c) Horn cancer
d) All

236. The species of Oesophagostomum which affect sheep and goat
a) *O. radiatum*
b) *O. dentatum*
c) *O. colombianum*
d) None

237. In nervous system, Canine Distemper virus has affinity for
a) Myelinated portion of brain & spinal cord
b) Pia mater&Arachnoid
c) Neurons of Grey matter of cerebrum
d) Capillary network of hippocampus

238. A disease in poultry where intranuclear inclusions are found in the epithelial cells of bronchial mucosa
a) ILT
b) IBD
c) IBD
d) RD

239. In highly pathogenic Avian Influenza virus, there is multiple----------molecules at the cleavage site which can be cleaved by body proteases
a) Arginine
b) Leucine
c) Methionine
d) Glycine

240. Scaly leg' in poultry is caused by
a) *Ornithoryncus gallinae*
b) *Cnemidocoptes mutans*
c) *Echidnophaga gallinaceae*
d) Menacanthus spp.

241. Saucer shaped lesions on liver are pathgnomonic for the disease
a) Salmenellosis
b) Histomoniasis
c) Inclusion body Hepatitis
d) Gout

242. Balooning of intestine is seen in Coccidiosis caused by
a) *E. necatrix*
b) *E. tenella*
c) *E. maxima*
d) *E. acervulina*

243. Epidemic tremor is also known as
a) Avian encephalomyelitis
b) Infectious bronchitis
c) Avian Influenza
d) Crazy chick disease

244. Laboured breathing or Gape is characteristic of
a) Avian Influenza
b) Histomoniasis
c) Syngamiasis
d) Fowl pox

245. Hemophilus gallinarum causes
a) Infectious bronchitis
b) Infectious coryza
c) Infectious laryngeotracheitis
d) Fowl cholera

246. Urate crystals in Gout can be demonstrated by
a) Grocott's stain
b) New Methylene blue
c) De Galantha stain
d) Sellars' stain

247. The virus which interfere with a normal blood clotting mechanism causing muscle hemorrhage
a) BHD
b) AI
c) Both a & b
d) IBD

248. `Watery Whites` is seen in
a) ILT
b) IB
c) EDS 76
d) IBD

249. Hepatic coccidiosis in rabbits is caused by
a) *Eimeria maxima*
b) *E. steidae*
c) *E. acervulina*
d) *E. necatrix*

250. Hemorrhage in the proventriculus, caccal tonsil and ulcerative enteritis in a bird
a) R D
b) I B D
c) I L T
d) I B

251. Icteric appearance of the carcass,Hepatomegaly with dark red to brownish discolouration and the surface shows distinctive copper bronze is seen is
a) Fowl typhoid
b) Fowl plague
c) Salmonellosis
d) All of these

252. Coli granulomas is also called as
a) Nodular Taeniasis
b) Tuberculosis
c) Hjarre`s disease
d) CRD

253. Exudative diathesis in birds is due to the deficiency of
a) Vit A & selenium
b) Vit K & calcium
c) Vit E & selenium
d) Vit D & calcium

254. Marked elevation of body temperature, rapid loss of body weight, passing of fluid, green droppings, paralysis late in the disease and birds are extremely anemic
a) Spirochaetosis
b) Bacillary white diarrhoea
c) Ranikhet disease
d) Fowl typhoid

255. Dead in shell is observed in disease caused by
a) *Salmonella pullorum*
b) *S. gallinarum*
c) Both
d) None

256. Hard, yellow, nodular granulomas in the intestine and caecum is observed in
a) TB
b) Hjarres` disease
c) Ulcerative enteritis
d) Ulceratiuve coloitis

257. Vertically transmitting bacterial disease
a) Fowl typhoid
b) Mycoplasmosis
c) Both
d) None of the above

258. Characteristic PM findings of colisepticaemia
a) Peritonitis
b) Pericarditis
c) Perihepatitis
d) All

259. Knobby appearance of the spleen is seen in
a) Coligranuloma
b) TB
c) Salmonellosis
d) RD

260. Cloudiness with presence of cheesy exudates in the air sac membranes and body cavities, fibrinous pericarditis and perihepatitis are lesions of
a) Mycoplasmosis
b) Avian Influenza
c) Avian monocytosis
d) Inclusion Body Hepatitis

261. Cutaneous filariasis in elephants is caused by
a) *Dirofilaria immitis*
b) *D. repens*
c) *Indofilaria pattabhiramani*
d) None of the above

262. Tyzzers disease is caused by
a) *Clostridium septicum*
b) *Cl. perfringens*
c) *Cl. pilliformis*
d) *Cl. Novyi*

263. "Tophi" is seen in
a) Fat necrosis
b) Visceral gout
c) Articular gout
d) Caseation

264. A predisposing cause for a disease
a) Chemicals
b) X rays
c) Age
d) Microbes

265. The cell organelle involved in the organization of spindles in cell division
a) Golgi apparatus
b) Centriole
c) Endoplasmic reticulum
d) Ribosome

266. The earliest form of cellular degeneration in which the cytoplasm has a ground glass appearance
a) Hydropic degeneration
b) Albuminous degeneration
c) Mucoid degeneration
d) Fatty change

267. Hotis test is used as
a) Urine test
b) Liver function test
c) Mastitis test
d) None of these

268. The type of necrosis observed in brain tissue
a) Caseation necrosis
b) Coagulative necrosis
c) Liquefaction necrosis
d) Fat necrosis

269. The type of gangrene that occurs in faulty drenching of medicines to lungs
a) Dry
b) Moist
c) Mixed
d) Gas

270. "Pseudomelanosis coli" is
a) Postmortem softening
b) Postmortem clotting
c) Postmortem staining
d) Postmortem displacement

271. The principal constituent of the exudate in serous inflammation is
a) Mucous
b) Fibrin
c) Serum
d) Plasma

272. A diffuse spreading suppurative inflammation of connective tissue is called
a) Abscess
b) Boil
c) Cellulitis
d) Pustule

273. The main character of chronic inflammation
a) Inflammation
b) Exudation
c) Connective tissue proliferation
d) Caseation

274. Healing in a surgical incision wound is mainly by
a) First intention
b) Second intention
c) Granulation
d) Third intention

275. Transformation of one type of tissue into another is called
a) Anaplasia
b) Metaplasia
c) Dysplasia
d) Hyperplasia

276. Among the following, which condition does not occur?
a) Acute local passive hyperemia
b) Chronic general passive hyperemia
c) Chronic general active hyperemia
d) Acute general passive hyperemia

277. A thrombus spreading into both branches at the bifurcation of artery is called
a) Mixed thrombus
b) Occlusive thrombus
c) Saddle thrombus
d) Canalised thrombus

278. Brisket disease is
a) Cachetic oedema
b) High altitude oedema
c) Parasitic oedema
d) Low altitude oedema

279. Primary shock, appearing immediately after injury is of ----------origin
a) Infectious
b) Nervous
c) Circulatory
d) Toxic

280. The tissue most affected in radiation injury is
a) Neurons
b) Germ cells
c) Osteoclasts
d) Hepatocytes

281. The microphages of Metchnikoff are
a) Monocytes
b) Basophils
c) Lymphocytes
d) Neutrophils

282. Mucoid is of ----------origin
a) Connective tissue
b) Epithelial
c) Smooth muscle
d) Cerebral tissue

283. "Cart wheel nucleus" is characteristic of
a) Epitheloid cells
b) Plasma cells
c) Gaint cells
d) Eosinophils

284. Which of the following is not matching
a) Myxoedema-Hypothyroidism
b) Gigantism-Hypopitutarism
c) Diabetes inspidus-lack of ADH
d) Diabetes mellitus-Lack of insulin

285. If the packed cell volume is high it indicates
a) Polycythemia
b) Oligocythemia
c) Anemia
d) None of these

286. Parakeratosis in pigs occurs due to deficiency of
a) Manganese
b) Zinc
c) Iodine
d) Cobalt

287. A common defect seen in new born animals where there is an abnormal connection between the nasal cavity and the mouth and hence milk parsers into the lungs
a) Facial cleft
b) Hare lip
c) Cleft palate
d) Agnathia

288. A mild from of spasm confined to groups of muscles is called
a) Convulsion
b) Tremor
c) Epilepsy
d) Ataxia

289. White spots in comb is characteristic of
a) Pasteurellosis
b) Fowl pox
c) Favus
d) Hypovitaminosis A

290. Carbon tetrachloride poisoning leads to
a) Cloudy swelling in liver
b) Hydropic degeneration in liver
c) Fatty change in liver
d) None of these

291. In Jaagsiekte, the characteristic microscopic lesion is
a) Presence of inclusion bodies
b) Presence of parasites
c) Presence of lymphoid follicles in the lung parenchyma
d) Adenomatosis of alveoli

292. Serofibrinous pericarditis is most pathognomonic lesion of
a) Colisepticemia
b) Salmonellosis
c) IB
d) Infectious coryza

293. Multiple bone fractures lead quickly to
a) Gas embolism
b) Bone embolism
c) Fat embolism
d) Thrombotic embolism

294. Heart failure cells are
a) Degenerating myofibrils
b) Macrophages in the spleen
c) Haemosiderophages in the lungs
d) Kupffers cells

295. Heart is seen out side the thorax
a) Ectopia cardis
b) Acardia
c) Diplocardia
d) None of the above

296. Progressive wasting, stiffness of fore legs and back and deposition of caleium in the arteries, heart muscle, lungs and kidney are seen in
a) Manchester washing disease
b) Tuberculosis of heart
c) Congenital defect of heart
d) Atheroselerosis

297. When large quantities of hemoglobin are excreted through the kidneys the lesion is called as
a) Nephrosis
b) Lower nephron nephrosis
c) Cholemic nephrosis
d) Toxic nephrosis

298. White spotted kidney is seen in
a) Pyemic nephritis
b) Pyclonephritis
c) Interstitial nephritis
d) Suppurative nephritis

299. Wooden tongue is caused by
a) Actinobacillus
b) Actinomycosis
c) Tuberculosis
d) Brucellosis

300. Marbling of lungs is seen in
a) CBPP
b) CCPP
c) TB
d) FMD

301. Leomyosarcoma is a malignant tumour arising from
a) Skeletal muscle
b) Cardiac muscle
c) Smooth muscle
d) None

254
302. Marked elevation of body temperature, rapid loss of body weight, passing of fluid green droppings, paralysis late in the disease and the birds are extremely anemic
a) Spirochetosis
b) Bacillary white diarrhea
c) Ranikhet disease
d) Fowl typhoid

303. Generalised congestion of internal organs, cyanosis of combs, petechial haemorrhages in the pericardium and other organs
a) Fowl cholera
b) Bangkok haemorrhagic disease
c) IBD
d) Fowl typhoid

304. Anaemia, emaciation, pin point haemorrhages or grayish pin point spots in the intestinal mucosa and the lumen filled with blood
a) Fowl cholera
b) Coccidiosis
c) Ranikhet disease
d) Fowl typhoid

305. Soft and rubbery beak is due to deficiency of
a) Vitamin A
b) Vitamin E
c) Vitamin D
d) Vitamin K

306. Gangrenous myositis is usually observed in
a) Black quarter
b) Actinomycosis
c) Glanders
d) Toxoplasmosis

307. In which species Aflatoxin produces neoplasia
a) Pigs
b) Cattle
c) Ducks
d) All the above

308. Haematoma is a tumour of
a) Blood cells
b) Bone
c) Haematopoitic system
d) None of these

309. The example of Intra Nuclear inclusion body is
a) Infectious canine hepatitis
b) Rabies
c) Fowl pox
d) None of these

310. In Rinderpest, most prominent lesions are seen in
a) Mouth
b) Rumen
c) Small intestine
d) Large intestine

311. A parasite which is an inhabitant of esophageal wall which produces a tumour
a) Lever fluke
b) *Spirocerca lupi*
c) Schistosome
d) All the three

312. Diffuse granulation tissue on the serous membranes resembling a bunch of grapes or pearls is seen in
a) TB
b) JD
c) CBPP
d) CCPP

313. In the intestinal submucosa, the epithelioid cells may fuse to form syncytial mass and usually never progress further and is called
a) Granuloma
b) Symplasma stage
c) epithelia
d) None

314. The capsule of the organism which is able to resist phagocytosis and prevents clotting of blood. The organism is
a) *Mycobacterium tuberculosis*
b) Anthrax bacills tuberculosis
c) *Mycobacterium pseudotuberculosis*
d) *Clostridium chauvori*

315. The toxin factor produced in enterotoxaemia is
a) Alpha factor
b) Beta factor
c) Epsilon factor
d) Gama factor

KEY ANSWERS

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
a	d	b	a	a	d	b	d	c	a	a	d	a	a	b
16	17	18	19	20	21	22	23	24	25	26	27	28	29	30
a	b	a	b	c	c	a	b	c	b	c	d	b	b	a
31	32	33	34	35	36	37	38	39	40	41	42	43	44	45
d	b	a	b	d	c	d	c	d	a	a	b	c	c	a

46	47	48	49	50	51	52	53	54	55	56	57	58	59	60
a	d	c	a	d	c	b	c	c	d	c	c	b	c	c
61	62	63	64	65	66	67	68	69	70	71	72	73	74	75
b	b	c	d	c	b	a	d	d	c	c	d	c	c	d
76	77	78	79	80	81	82	83	84	85	86	87	88	89	90
a	d	d	b	c	b	a	b	c	c	a	c	a	a	d
91	92	93	94	95	96	97	98	99	100	101	102	103	104	105
a	a	b	b	c	b	c	a	a	a	c	b	b	a	c
106	107	108	109	110	111	112	113	114	115	116	117	118	119	120
b	a	c	b	d	b	c	b	d	b	a	d	d	a	b
121	122	123	124	125	126	127	128	129	130	131	132	133	134	135
a	d	d	a	b	a	a	b	c	c	c	b	b	b	a
136	137	138	139	140	141	142	143	144	145	146	147	148	149	150
d	d	d	d	d	d	c	b	b	d	a	c	a	d	c
151	152	153	154	155	156	157	158	159	160	161	162	163	164	165
a	a	b	c	b	a	a	b	b	a	d	b	a	b	b
166	167	168	169	170	171	172	173	174	175	176	177	178	179	180
c	d	d	a	d	b	a	b	b	c	d	c	c	c	b
181	182	183	184	185	186	187	188	189	190	191	192	193	194	195
a	b	a	b	a	c	c	a	d	a	b	a	c	b	d
196	197	198	199	200	201	202	203	204	205	206	207	208	209	210
c	b	a	c	b	a	c	b	b	a	a	b	b	d	a
211	212	213	214	215	216	217	218	219	220	221	222	223	224	225
a	b	c	a	b	c	a	c	c	d	c	c	a	c	d
226	227	228	229	230	231	232	233	234	235	236	237	238	239	240
a	c	a	c	a	a	a	a	c	b	c	a	a	a	b
241	242	243	244	245	246	247	248	249	250	251	252	253	254	255
b	a	a	c	b	c	d	b	b	a	a	c	c	c	c
256	257	258	259	260	261	262	263	264	265	266	267	268	269	270
b	c	d	b	a	c	c	c	c	b	b	c	c	b	c
271	272	273	274	275	276	277	278	279	280	281	282	283	284	285
d	c	c	a	b	c	c	b	b	b	d	a	b	b	a
286	287	288	289	290	291	292	293	294	295	296	297	298	299	300
b	c	b	c	d	d	a	d	c	a	a	b	c	a	a
301	302	303	304	305	306	307	308	309	310	311	312	313	314	315
c	d	a	b	c	a	c	d	a	d	b	a	b	b	c

II. Fill in the blanks:

1. The putrefaction of necrotic tissue by invasion of saprophytic bacteria is known as .....
2. Sequence of events occur in the tissue due to any causative agent is known as .....
3. Hemorrhages into the brain with loss of consciousness is called as .....
4. Congenital closure of the body opening is termed as .....
5. ..... type of calcification occurs in the tubercular nodule.
6. ..... are called as second line of defense.
7. Programmed cell death in a normal tissue is termed as .....

8. Prevention of blood reaching to a particular area is known as .....
9. Thinning of blood vessel is called as .....
10. Generalized subcutaneous oedema is known as .....
11. The degenerative changes occur in the nerve and Schwan is known as .....
12. Inflammation of Piamater is .....
13. Howell Jolly bodies are seen in ..... cells.
14. Inflammation of caecum is termed as .....
15. Kidney appear ..... in Hog cholera virus infection.
16. Coxitis means inflammation of .....
17. Diffused amyloidosis of spleen is known as .....
18. Abnormal thickening of stratum granulosum is .....
19. Liver is termed as ..... in parasitic cirrhosis.
20. Abnormal accumulation of fluid in and around brain is .....
21. The tumor originates from an embryonic defect consisting two or more germ layers is .....
22. Osteosarcoma is associated with ..... parasite in canines.
23. Hyperkeratosis of foot pads are seen in ..... disease.
24. The pathognomonic lesion in black quarter is known as .....
25. Zebra markings in the rectum of cattle are seen ..... disease.
26. The enterotoxaemia in sheep is also called as .....
27. Button ulcers in the intestines of porcines are seen in .....
28. Ascoli's test is used to diagnose .....
29. The rabies virus produces ..... type of inclusions in the neurons.
30. The cell nests are seen in ..... tumor.
31. The lymphoid leucosis in the birds is also called as .....
32. Intracytoplasmic inclusions in Avian pox are called as .....
33. The causative agent of infectious bursal disease is .....
34. Fibrinous pericarditis and perihepatitis are pathognomonic lesions in .....
35. Exudative diathesis is associated with deficiency of .....
36. Diphtheritic pseudomembraneous lesion in esophagus is seen in ..... disease.
37. Avian encephalitis is caused by .....
38. Curled toe paralysis in the birds is due to ..... deficiency.
39. Turkey towel appearance lesion in the crop is produced by .....
40. The most pathogenic strain of avian influenza is .....
41. ..... is known as Father of Cellular Pathology.
42. ..... and ..... are the two forms of gout.
43. Fatty infiltration may occur in liver when there is deficiency of .....
44. Death of the body as a whole is called .....
45. ..... is an increase in the size of cells and ..... is an increase in the number of cells.
46. Pneumoconiosis caused by coal dust is called ..... and bycotton dust is called.....
47. Local deficiency of arterial blood in an organ is called .....
48. Inflammation of the salivary gland is termed .....
49. Narrowing of bronchial lumen is called .....
50. Deposition of iron in lungs is called as .....
51. Absence of limbs is called as .....
52. Obstruction of oesophagus is called .....
53. ..... is the common heart worm of dogs.
54. Hernia of spinal cord is known as .....
55. Bloat occurs in ..... and ..... form.

56. ..... is abnormal accumulation of CSF in and around brain.
57. Ultraviolet rays induce neoplasia by ..... formation in DNA of cells.
58. Swine fever virus directly affects ..... system which is responsible for the gross lesions such as ..... in spleen ..... (Turkey egg appearance) in kidney.
59. Mucosal disease occurs in cattle aged about ..... and causes ..... lesions in mucosa.
60. Rabies causes ..... encephalomyelitis and results in ..... nodules in the brain due to collection of ..... cells.
61. Black quarter is characterized by ..... inflammation.
62. Avian encephalomyelitis is also known as ..... and is characterized by
63. ..... as a pathognomonic lesion in CNS.
64. Fowl pox is characterized by ..... lesions and occur in ..... and ..... forms.
65. Gangrenous dermatitis is mainly a disease of broilers aged over ..... of age which occurs following immunosupression due to ..... disease.
66. Candida albicans causes ..... in birds and is characterized by ..... in upper gastrointestinal tract.
67. Avian mycoplasmosis is characterized by ..... appearance of airsacs.
68. The mechanism of the body to tolerate the changes in the environment is known as .....
69. Congo red is a special stain to demonstrate ..... in tissues.
70. Shock that occurs due to loss of blood volume is termed as .....
71. An embolus that passes directly from right auricle lto left auricle through a patent foramen ovale is known as .....
72. Macrophages in the alveoli of lung laden with haemosiderin pigments are known as.....
73. ..... type of inflammation is observed in coccidiosis.
74. Gravitational settling of blood in blood vessels after death is known as .....
75. Moist gangrene is commonly observed in .....
76. Accumulation of fluid in ventricles of the brain is known as .....
77. Air embolism is observed in ..... disease.
78. A channel of communication between pulmonary artaery and aorta that persists even after birth is known as .....
79. A condition in which a blood clot in the pericardial sac surrounds the heart is known as .....
80. Calcification of aorta and muscular arteries due to consumption of calcinogenic plants is known as .....
81. Equine laryngeal hemiplegia is commonly known as .....
82. Inflammation of duramater of brain is known as .....
83. Incomplete expansion or collapse of lung alveoli is known as .....
84. Faulty drenching of animals with drugs or gruel brings about .....in lungs.
85. ..... nephrititis is commonly observed in *Leptospira canicola* infection in dogs.
86. Chronic alveolar emphysema in horses is known as .....
87. Macrophages laden with hemosiderin pigment in the lungs are called as .....
88. Mirror image of the nucleus is seen in ..... giant cells.
89. Peppered appearances of the lung is a feature of ..... condition.
90. The type of blood clot noticed in the ventricles of the heart, when the animal dies after prolonged illness is .....
91. Blood in tunica vaginalis is termed as .....
92. For clinical diagnosis of amyloidosis in animals ..... dye can be injected.

93. Transformation of one type of tissue into another type in the same germinal layer is known as .....
94. When calcium levels are high in srum ..... type of calcification is common.
95. The frequent site for the lodgment of the urinary calculi in cattle is .....
96. Foetalisation or epithelisation of alveolar epithelium is seen in ..... type of pneumonia.
97. Microcytic hypo chronic anemia is seen in ..... deficiency.
98. Telescoping of one portion of intestine into another is known as .....
99. Presence of froth in the trachea and bronchi indicative of .....
100. Cerebro spinal Nematodiasis in young horses otherwise known as .....
101. Osteodystrophia fibrosa condition results into ..... condition in case of dogs.
102. *Fasciola hepatica* infection results into ..... type of cirrhosis in cattle.
103. Langhan's type of giant cells belong to ..... type and are commonly observed in ..... disease.
104. Nutmeg appearance of liver is observed in .....
105. The force which attracts the leukocytes to the inflammatory area is known as .....
106. Deposition of exogenous pigments in pulmonary tissue is known .....
107. An infarct is a localized area of ..... necrosis.
108. Healing of bone takes place by ..... formation.
109. Two types of atelectasis are ..... and .....
110. Gangrenous stomatitis is also known as ..... which is caused commonly by ..... organisms.
111. Faulty drenching of gruel and irritant drugs in animals causes ..... pneumonia.
112. Inflammation of pleura is known as .....
113. Protrusion of intestinal loops into natural or acquired openings is known as .....
114. The word necropsy means .....
115. Grey horses are more susceptible to ..... tumours.
116. Abscess is an example of ..... necrosis.
117. The degree of burn in which the dermis is also affected as .....
118. A thrombus containing bacteria is called as .....
119. ..... is a congenital condition in which there is complete absence of the hind limbs.
120. Inflammation of the gall bladder is called .....
121. Presence of "blue line" in the gum is characteristic of .....
122. Melanocytes and melanophores can be distinguished using ..... test.
123. Inflammation of tongue is called as .....
124. The type of cirrhosis seen in well developed aflatoxicosis is .....
125. The test employed to detect ketone bodies in urine is .....
126. Atheroma of aorta in cattle is usually caused by .....
127. Toxic granules present in neutrophils is called as .....
128. The type of emphysema seen in horses suffering from Heaves is .....
129. ..... is dialation of renal pelvis due to obstruction to free flow of urine.
130. Oxalate nephrosis occur in dogs by the ingestion of .....
131. The characteristic microscopic lesion seen in kidney in case of subacute glomerulonephritis is .....
132. Embolism in end arteries produces .....
133. ..... is the alteration in the size, shape and orientation of cells.
134. Blood in stools is .....
135. Cooling of the body after death is known as .....
136. ..... is the accumulation of fluid in peritoneal cavity.
137. ..... is haemorrhage into the brain.

138. Hemosiderin pigment in lung causes .....
139. ..... is the complete absence of an organ.
140. Bleeding into tunica vaginalis is termed as .....
141. ..... is the condition where heart is seen outside the thorax.
142. ..... is paralysis of one side of the body.
143. Accumulation of the fluid in the brain and subarachnoid space is called .....
144. Uremia is a ..... syndrome resulting from ..... insufficiency.
145. Degenerative renal lesions are known as .....
146. Infiltration of leukocytes in the space of Virchow-Robin is known as .....
147. ..... is the inflammation of hair follicles.
148. ..... is the dilation of bronchi.
149. ..... is a condition of reuced excretion of urine.
150. ..... is a wound caused by a bullet or nail.
151. The condition produced by the physician by needless medication is called ..... disease.
152. ..... pathology is the study of diseases of animals in comparison to that in man.
153. Escape of erythrocyte between endothelial cells, without a break in the wall of the capillary is called .....
154. Colliquative necrosis is commonly seen in ..... tissue.
155. Cracks in the nucleus, which is undergoing necrosis is called .....
156. ..... lymphocytes are seen in the lymphoid tissue and are short lived.
157. ..... is exuberant granulation tissue where scar grows even after the formation of surface epithelium.
158. Hemobilirubin excreted through glomeruli into urine is called .....
159. Sulfonamide therapy may lead on to ..... in urinary tract.
160. Increased peripheral resistance to blood flow, leading to failure of heart is called.....
161. Wasting disease of bonemarrow causes ..... anaemia.
162. ..... type of pneumonia is frequently met within animals.
163. ..... type of hepatic necrosis is seen in heliotrope poisoning in rats.
164. Inflammation of crop is termed .....
165. Pseudopregnancy noticed in canines represents ..... condition caused by persistent corpus luteum.
166. Epithelial crescents are seen in ..... nephritis.
167. Inflammation of bursa over the joint is called .....
168. Polio encephalitis is inflammation of ..... of brain.
169. Non suppurative acute myositis is noticed in ..... disease in cattle.
170. ..... is closure of the lumen of a hollow organ or duct.
171. Initiation of a disease is brought about by ..... cause.
172. Concentric layers of hyalinised epithelial cells which stain with iodine are called .....
173. High protein diet and deficiency of Vit.A in hens, precipitates the onset of ..... disease.
174. In pit ponies ..... condition may be noticed in lungs.
175. Blushing is an example of ..... hyperaemia.
176. Deposition of calcium salts and grains in the salivary duct can result is .....
177. Presence of gas in pericardium is termed .....
178. Inflammation confined to the valves of heart is called .....
179. An immature erythrocyte which cannot divide further by mitosis is called .....
180. ..... leukemia is the most common type of leukemia in animals.
181. A diffuse dilatation of oesophagus of paralytic origin in puppies is termed .....

182. When the principle site of inflammation is the tubules of the kidney, it is referred to as .....
183. Mild muscular spasm confined to a group of muscle is called .....
184. Presence of endometrial glands in places other than endometrium is .....
185. Bony proliferation projecting into the medullary cavity is termed .....
186. Greasy pig disease is caused by ..... organism.
187. In enterotoxaemia clinically ..... and ..... could be observed in affected animals.
188. Severe necrotizing myositis in Black quarter is due to .....
189. The transmission of blue tongue virus between animals is through .....
190. *Leptospira icterohaemorrhagiae* causes ..... disease in human beings and could be demonstrated in tissue sections by .....
191. Swine erysipelas is characterized by diamond shape .....
192. The common prion disease of sheep is .....
193. Neoplasm of adrenal medulla is known as ..... and rabdomyosarcoma is a malignant neoplasm of ..... (tissue).
194. Canine distemper is characterized by ..... in cerebellum.
195. Tetanus is mainly a disease of ..... (animal) and ..... the toxin raesponsible for spasms of muscles.
196. Recovered birds from salmonellosis become .....
197. *Haemophilus paragallinarum* causes ..... in chicken.
198. Hjarre's disease is also known as ..... and occurs due ..... organism.
199. ..... is a common complication of infectious bursal disease in young broilers.
200. The elementary bodies in the renal epithelial cells indicate ..... disease.
201. Vitamin E deficiency causes ..... and .....
202. ..... is a process by which a primary tumor gives rise to secondary growths.
203. ..... tumor in dogs spreads by coitus.
204. Histologically, horn cancer in cattle is .....
205. Infectious canine hepatitis is also known as .....
206. ..... staining technique is employed in the diagnosis of Rabies.
207. ..... nephritis is seen in dogs suffering from Leptospirosis.
208. In swine fever the kidneys of affected pigs appear as .....
209. *Strongylus vulgaris* produces ..... in the anterior mesenteric artery in horses.
210. ..... type giant cells are seen in tuberculosis lesions.
211. Animals suffering from deficiency of Phosphorus develop .....
212. Manganese deficiency in grower chicken results in .....
213. The process of selective absorption of iron by intestinal mucosa is known as .....
214. ..... in sheep is due to development of nervous lesions in copper deficiency.
215. Vitamin A deficiency in birds results in ..... characterized by oculo-nasal discharge.
216. Exudation diathesis in chicks is due to deficiency of .....
217. Two common lymphoid neoplastic conditions of birds are ..... and .....
218. Three strains of New Castle Disease viruses are .....
219. E.coli in fowls causes ..... in heart and ..... in liver.
220. ..... also known as Big Liver Disease.
221. Choline deficiency in birds causes .....
222. ..... in pigs is due to deficiency of pantothenic acid.
223. Lock jaw is the manifestation of .....
224. "Tigroid" appearance of heart is a lesion seen in .....

225. Rabies is confirmed by demonstration of .....
226. In dogs, tumours of parathyroid is known as .....
227. ..... staining is used in exfoliative cytology for diagnosis of tumors.
228. Suppurative Osteomyelitis of the mandible is the lesion found in .....
229. "Pearls" are noticed in .....
230. Splenomegaly is characteristically seen in .....
231. Mirror-image nuclei is peculiarly observed in .....
232. ..... is the characteristic histopathological finding in aflatoxicosis.
233. Subcutaneous edema of face and wattles together with conjunctivitis is often seen in .....
234. ..... are the histopathological feature of Fowl pox.
235. "Star gazing syndrome" is due to the deficiency of thiamine and "curled toe paralysis" is due to .....
236. Brooder pneumonia is caused by .....
237. Chorea is the sign seen in .....
238. ..... is dermatitis produced by larvae of Anchylostomes in aberrant hosts.
239. ..... is benign tumor of enamel while ..... is a malignant tumor of smooth muscle.
240. ..... are the diagnostic feature of Rabies while ..... are the feature of Theileriasis.
241. Pulpy kidney is an important finding in .....
242. In rabies, Negri bodies can be demonstrated from ..... in canines while from ..... in bovines.
243. "Gapes" is a characteristic feature of ..... infection.
244. "Copper Bronze sheen" is the characteristic appearance of liver in .....
245. Caseous air sacculitis is noticed in .....
246. Petechiae are prominently seen at the junction of ..... and ..... in infectious bursal disease.
247. "Crazy chick disease" is due to the deficiency of .....
248. Fatty liver with haemorrhage is commonly seen in .....
249. Inclusion bodies in ..... epithelium is a diagnostic feature of ILT.
250. ..... is the target organ for Aflatoxicosis.
251. The concentric layers of keratin forming ..... are characteristic feature of squamous cell carcinoma.
252. Trachea and larynx shows ..... in Glanders.
253. Acanthosis is characteristic histopathological feature in ..... form of Leishmaniasis.
254. Formation of ..... is the pathognomonic histopathological lesion in tuberculosis.
255. Diphasic fever is the peculiar sign of .....
256. ..... is the important gross lesion in anthrax.
257. Biliary hyperplasia is the characteristic histopathological finding in .....
258. The pathognomonic lesions in colibacillosis are ..... and .....
259. Subcutaneous edema of face and wattles together with conjunctivitis is often seen in .....
260. Pathognomonic lesions in Rinderpest are (1) ..... (2) .....
261. The essential lesion of Black Quarter occurs in ..... and pathologically it is .....
262. Pulpy kidney disease caused by ..... while the etiology of Bacillary white diarrhoea is .....
263. Babesiosis causes anaemic changes like (1) ..... (2) ..... (3) .....

264. Botryomycosis is caused by ..... and the name is because the lesion resembles .....
265. Pearl disease with calcification is common in tuberculosis of ..... species while in horses the lesion is ..... in nature.
266. In Brucellosis of boars, the most extensively affected organs are .....
267. Haemorrhagic tracheitis in Rabbits is a ..... disease.
268. A common blood parasite causing disease in carnivorous zoo animals in this state is.....
269. Nutritional roup is often diagnosed by lesions in ..... and they appear as Pastules.
270. Xeropthalmia is due to ..... while 'Blue comb' is caused by .....
271. Parasites capable of causing neoplasms are ..... and .....
272. ..... and ..... are carcinogenic hydrocarbons.
273. Two clinical manifestations of Rabies in dogs are ..... and .....
274. Microscopic lesions observed in scrapie include ..... and ..... in brain.
275. In coccidiosis asexual reproduction of parasite leads to formation of ..... while sexual cycle leads to formation of .....
276. Glanders is a disease of ..... and caused by .....
277. Braxy is a fatal disease of ..... caused by .....
278. Two important and common round worms of poultry are ..... and .....
279. Two common fungal toxins are ..... which is a hepatoxin and ..... which is a nephrotoxin.
280. Lesions of Marek's disease are seen in ..... and .....
281. ..... virus is found in the natural cases of rabies and passage through rabbit increases its virulence and is called ..... virus.
282. African horse sickness may develop either as ..... form or ..... form or both.
283. The capsule of Anthrax bacillus has a ..... property which prevents clotting of blood.
284. The toxin produced by *Clostridium tetani* is a ..... toxin.
285. Scrapie is a viral disease of ..... species of animal.
286. Early diagnosis of cancer could be done by staining detached cells using ..... stain.
287. Ancylostomes produce a ..... and ..... type of anaemia.
288. ..... is found in the small intestine of sheep and goats.

KEY ANSWERS

1	**gangrene**	2	**Pathogenesis**
3	**Apoplexy**	4	**Atresia**
5	**Dystrophic**	6	**Macrophages**
7	**Apoptosis**	8	**Ischemia**
9	**Aneurysm**	10	**Anasarca**
11	**Wallerian degeneration**	12	**leptomeningitis**
13	**RBC**	14	**typhilitis**
15	**turkey egg**	16	**hip joint**
17	**bacon spleen**	18	**hyperkeratosis**
19	**clay pipe liver**	20	**hydrocephalus**
21	**Teratoma**	22	***Spirocerca lupi***

23	Canine distemper	24	Gas gangrene
25	Rinderpest	26	Pulpy kidney disease/Over eating disease
27	Swine fever/Hog cholera	28	Anthrax
29	intracytoplasmic	30	Squamour cell carcinoma
31	Big liver disease	32	Bollinger bodies
33	Birna virus	34	E. coli infection
35	Vitamin E	36	Duck viral enteritis
37	Picorna virus	38	Vitamin B_{12} Riboflavin
39	Candida albicans/ Candidiosis	40	H_5N_1
41	Rudolf Virchow	42	Articular ; visceral
43	choline	44	somatic death
45	Hypertrophy ; hyperplasia	46	Anthracosis ; byssinosis
47	ischemia	48	Sialadenitis or Parotiditis
49	Bronchiostenosis	50	Siderosis
51	Amelia	52	Choke
53	*Dirofilaria immitis*	54	Rachicela
55	Gaseous ; frothy	56	Hydrocephalus
57	Pyrimidine dimmer	58	Vascular; infarctions; Haemorrhage
59	6 month – 2 yrs ; ulcerations/erosions	60	Non suppurative lymphocytic; Babes ; Glial
61	Haemorrhagic emphysematous myositis	62	Epidemic Tremor
63	Chromatolysis	64	Nodular; cutaneous; Diphtheretic
65	4 weeks ; IBD	66	Maniliasis ; Pseudo membrane or diphtheritic membrane
67	beaded	68	Homeostasis
69	amyloid	70	Hypovolemic
71	Paradoxical embolism	72	Heart failure cells
73	Haemorrhagic	74	Hypostatic congestion
75	intestine and lungs	76	Hydrocephalus
77	Caisson	78	ductus arteriosus
79	Cardiac tamponade	80	Monckberg's medial sclerosis
81	Roaring	82	Patchy meningitis
83	Atelectasis	84	Aspiration Pneumonia
85	Interstitial	86	Heaves/Broken wind
87	Heart failure cells	88	Reed-Stenberg
89	Anthracosis	90	Chicken fat clot
91	Hematocele	92	congo red
93	Metaplasia	94	metastatic
95	Sigmoid curve	96	interstitial
97	iron	98	Intussception
99	pulmonary edema	100	Kumri
101	Big head disease	102	clay pipe
103	foreign body giant cell ; Tuberculosis	104	chronic venous congestion of liver
105	Chemotaxis	106	Pneumoconiosis

107	ischaemic	108	callus
109	Congenital; acquired	110	Cancrum oris; spirochacter and fusiform
111	aspiration	112	Pleuritis
113	Hernia	114	seeing a corpse
115	skin	116	liquifacture
117	third degree burn	118	Septic thrombi
119	Apodia	120	Cholecystitis
121	lead poisoning	122	DOPA
123	Glossitis	124	Pericellular cirrhosis
125	Rotheras test	126	*Onchocerca armillata*
127	Dohle's bodies	128	chronic alveolar emphysema
129	Hydronephrosis	130	ethylene glycol
131	epithelial crescents	132	infarction
133	Dysplasia	134	Melena
135	Algormortis	136	Ascites
137	Apoplexy	138	brown induration
139	Aplasia	140	Haematocele
141	Ectopia cardis	142	Hemiplagia
143	Hydrocephalus	144	Toxemic ; renal
145	Nephrosis	146	Perivascular cuffing
147	Folliculus	148	Bronchicastasis
149	Oliguria	150	Perforating/Penetrating
151	latrogenic	152	Comparative
153	Diapedesis	154	brain
155	Karryorhexis	156	B
157	Keloid	158	Urobilinogen
159	calculi	160	Decompensation
161	Myelophthistic	162	Lobular
163	Centrilobular	164	Ingluvitis
165	false pregnancy	166	subacute glomerulo
167	Bursitis	168	grey matter
169	Black Quarter	170	Atresia
171	exciting	172	Corpora amylae
173	Gout	174	anthracosis
175	active	176	Sialoliths
177	Pneumopericardium	178	Valvular endocarditis
179	Rubinocyte	180	Lymphocytic
181	Ectasia	182	tubular nephritis
183	Tremors	184	endometriosis
185	Enostosis	186	*Staphylococcus hyicus*
187	Diarrhea ; Hyperglycemia	188	alphatoxin
189	culicoides	190	Weil's ; silver stain
191	lesions on the skin	192	Scrape
193	Pheochromocytoma ; skeletal muscle	194	demyelination of white substance
195	Horse ; tetanospasmin	196	carriers
197	infectious coryza	198	Coligranuloma ; *E.coli*

199	**Gangrenous dermatitis**	200	**Ornithosis**
201	**Crazy chick disease, Exudative diathesis ; Nutritional muscular dystrophy in chicken**	202	**Metastasis**
203	**Canine venereal**	204	**Squamous cell carcinoma**
205	**Rubarths disease**	206	**Sellers**
207	**Interstitial**	208	**Turkey egg**
209	**aneurysm**	210	**Langhans**
211	**Pica**	212	**Chondrodystrophy**
213	**Mucosal block**	214	**Sway back**
215	**nutritional roup**	216	**Vitamine E**
217	**lymphoid leucosis; Marek's disease**	218	**Mesogenic, Velogenic and Lentogenic strains**
219	**Pericardites; Perihepatitis**	220	**Lymphoid leukosisis**
221	**Perosis**	222	**Goose stepping**
223	**Tetanus**	224	**FMD**
225	**Negri bodies**	226	**Rubber jaw syndrome**
227	**Pappinicola**	228	**actinomycosis**
229	**Tuberculosis**	230	**Anthrax**
231	**Reed-Stenburg cells of Hodgkins disease**	232	**Bile duct hyperplasia**
233	**infectious coryza**	234	**Bollinger bodies**
235	**Riboflavin**	236	***Aspergillus fumigatus***
237	**Canine Distemper**	238	**Creeping eruption**
239	**Adamantinoma; Deromyosarcoma**	240	**Negri bodies ; Kochs blue bodies**
241	**enterotoxaemia**	242	**Hippocampus ; Cerebellum**
243	***Syngamus tracheae***	244	**Fowl typhoid**
245	**CRD**	246	**Proventriculus ; gizzard**
247	**Vitamin E**	248	**FLHS**
249	**tracheal**	250	**Liver**
251	**Pearls/Cell nest**	252	**ulcers**
253	**cutaneous**	254	**Granuloma**
255	**Canine distemper**	256	**Splenomegaly**
257	**Aflatoxicosis**	258	**Pericardites; Perihepatitis**
259	**infectious coryza**	260	**Zebra markings ; Bran like deposits in oral morcosa**
261	**thigh muscles ; Necrotising myosites**	262	***Cl. Perfringens ; Salmonella pullorum***
263	**Anisocytosis; Poikilocytosis; Punctate basophilia**	264	***Staphylococcus aureus ;* bunch of grapes**
265	**Bovine ; chronic proliferative**	266	**cervical lymph node**
267	**bacterial**	268	**Trypanosomiasis**
269	**oesophagus**	270	**Vitamin A deficiency; virus**
271	***Spirocerca lupi; Gongylonema neoplasticum***	272	**Benzanthracenes; Benzapyrene**
273	**dumb form ; furious form**	274	**Spongious; scrapie associated fibres**
275	**Trophozoites ; gametocytes**	276	**Horse ; *Actinobacillus mallei/ Malleomyces mallei***

277	**Sheep; Clostridium septicum**	278	***Ascardia galliae Heterakis gallinarum***
279	**Aflatoxin ; Ochratoxin**	280	**Sciatic nerves, brachial nerves (Peripheral nerves) ; in skin ovary, lungs, kidney, heart and liver**
281	**Street ; Fixed**	282	**DUNKOP ; DIKKOP**
283	**fibrinolytic**	284	**Tetanospasmin**
285	**ovine**	286	**Pappinicaula**
287	**Hypochromic; microcytic**	288	***Eimeria arlonge***

III. Write whether the following statements are true or false:

1. Pigmented animals are more susceptible for photosensitization. F
2. Lipofuschin is also known as "wear and tear" pigment. T
3. Mast cells are actively involved in phagocytosis. F
4. Inflammation of the teat is known as chelitis. F
5. Increase in size of a cell is termed as hyperplasia. F
6. Amyloidosis is commonly associated with hyper gamma globulinemia. T
7. The main purpose of inflammation is to enhance the effect of etiological agent. F
8. Particulate material circulating in the blood is called as emboli. T
9. The accumulation of fluid in the tunica vaginalis is called as Hydrocele. T
10. The apoptotic bodies are also called as suicidal bodies. F
11. Trichobezors are also known as Phytobezors. F
12. Presence of blood in the urine is termed as hemoglobinuria. F
13. Physiological hyperemia and oedema of endometrium is seen during estrous. T
14. Flurosis causes red discolouration of teeth enamel and dentine. F
15. Acute gastric dilatation is common due to heavy grain feeding in equines. T
16. Presence of heart outside the thoracic cavity is termed as ectopia cardis. T
17. Macrocytic hyperchromic anemia occurs due to deficiency of iron. F
18. Inflammation of kidney is called as nephrosis. F
19. Neuronophagia is phagocytosis of dead neurons by microglial cells. T
20. Blood in sputum is called as melena. F
21. Benign tumor of glandular epithelium is known as papilloma. F
22. Di-phasic fever in dogs is seen in infectious canine hepatitis. F
23. Habel mouse inoculation test is carried out to diagnose rabies. T
24. Basal cell carcinoma mainly spreads through lymphatic route. F
25. Tumor suppressor genes enhances the tumor growth. F
26. Langhan's type of giant cells are seen in tubercular nodules. T
27. Tigeroid heart is a pathognomonic lesion in FMD of calves. T
28. Equine viral encephalitis is also called as blind staggers. F
29. Peste-des-petits of ruminants is commonly seen in cattle. F
30. Anaplasia is hallmark of malignant tumor. T
31. Vertical transmission occurs in the Pullorum disease. T
32. Mushy chick disease is commonly seen in growers. F
33. The deficiency of Vit.E causes nutritional roup in the birds. F
34. Newcastle disease virus produces intranuclear inclusions in the tracheal epithelial cells. F
35. Paratyphoid is caused by Salmonella gallinarum in birds. F
36. Mis shapened and pedunculated ovaries are prominently seen in Pullorum disease. T
37. Marek's disease is also called as range paralysis. T

38. Swollen Wattles and necrotic foci on the liver is indicative of Mycoplasmosis.
39. The infectious coryza is transmitted by Argus percius.
40. The pale bone marrow with increased adipose tissue is associated with CAV infection.
41. Apoplectic cysts are seen in infarcts of brain.
42. Ascites is fluid accumulation in the abdominal cavity.
43. Haemorrhage into trachea produces asphyxia.
44. Metaplasia is increase in size of cell.
45. Karyorrhexis is fragmentation of nucleus.
46. Necrobiosis is local death of cell.
47. Plasma cells are seen in circulation.
48. Stomatitis is inflammation of stomach.
49. Jaundice is exogenous pigmentation.
50. Neutrophilic infiltration is mainly seen is chronic inflammation.
51. Frothy bloat is less harmful than dry bloat.
52. Colic is a condition often noticed in bovines.
53. Pneumonia is a very common disease found in animal.
54. Roaring is seen in cattle.
55. Phagocytes of bone is called as ostecoclast.
56. Volvulus produces moist gangrene.
57. Heart failure cells are seen in heart.
58. Neutrophils are otherwise known as pus csells.
59. The counter part of neutrophil in fowl is plasma cell.
60. Myelopthisic anaemia results in malnutrition.
61. Sheep pox is also characterized by pneumonia with inclusions in the septal cells.
62. Rubarth disease of canines mainly causes hard pad and produce intra nuclear inclusions.
63. Cancers are due to inappropriate or over expression of oncogene, suppressor gene or apoptosis genes.
64. Scrapie is caused by the altered proteins produced by herpes virus.
65. Anthrax occurs as localized infection in sheep and goat.
66. Fasciola hepatica infection predisposes sheep to black disease.
67. Death in Swine erysipelas is due to extensive diamond skin lesions.
68. Greasy pig disease is characterized by seborrhoeic dermatitis.
69. Vibriosis in cattle induces late gestational abortions.
70. Premunity is a feature in bacillary haemoglobinuria.
71. Pullorum is mainly a disesase of chicks under 3 weeks of age but also can occur in adults.
72. In infectious bronchitis only the egg production is affected.
73. Infectious laryngotracheitis is caused by Adeno virus and is characterized by haemorrhagic tracheitis.
74. Marek's disease causes immunosuppression in affected birds.
75. Heterophils in birds are the counter part of neutrophils of mammals.
76. Fowl cholera is a disease of chicks and rats act as reservoir host.
77. Clubbed appearance of feathers is due to thiamine deficiency.
78. Mycoplasma organisms can be demonstrated by Giemsa staining.
79. Staphylococcus aureus in poultry commonly affects skeletal system.
80. E.tenella causes severe haemorrhagic typhlitis in birds.
81. Cardinal signs of inflammation were described by Galen.
82. Fat emboli are common in long bone fractures.
83. Cigarette smoking is a predisposing factor for lung cancers.

84. Lipid peroxidation is one of the mechanisms by which free radicals induce cell injury.
85. Histamine in inflammation brings about vasodilatation and increased vascular permeability.
86. Thrush breast appearance of heart is a feature of Zenkers degeneration.
87. Secondary amyloidosis is associated with abnormalities in antibody producing cells.
88. Brown induration of lung is due to severe fibrosis and haemosiderosis of the tissue.
89. All types of cell injuries are always irreversible.
90. Lipopolysaccharide of Gram-negative bacteria brings about endotoxic death in animals.
91. Aspergillus spp. causes bacterial pneumonia in lungs of animals.
92. Intestinal calculi are common in equines and rare in other species of animals.
93. Deficiency of Vitamin B12 in humans causes pernicious anemia.
94. Luekaemia is neoplastic condition involving blood cells.
95. Abnormal dorsal curvature of the spinal column is known as lordosis.
96. Pneumothorax is a complication of trauma in thoracic region.
97. Necrotic enteritis is commonly due to Clostridial organisms.
98. Dirofilariasis in canines causes thrombosis of femoral vein.
99. Leucocytosis is a feature of late viral infections.
100. Inflammation of stifle joint is known as coxitis.
101. Yellowish colouration of visible mucous membranes is known as ictreus.
102. Margination of leucocytes is known as pavementation.
103. Automobile accidents causing fracture of long bones may lead to emboli formation.
104. The purpose of inflammation is to dilute and destroy the irritant.
105. Brown induration of lungs is due to calcification of the lung tissue.
106. Diffuse amyloidosis in spleen is known as sago spleen.
107. First cell to appear in acute inflammation is neutrophil.
108. Amyloid is a protein globulin conjugated with sulphated polysaccharides.
109. Escape of erythrocytes through intact blood vessels is known as diapedesis.
110. Failure of inter ventricular septal development is known as patent ductus ateriosis.
111. Atrophic rhinitis is common in goats and is characterized by catarrhal inflammation of nasal turbinates.
112. Impaction of rumen leads to absorption of lactates and subsequently alkalosis.
113. Pulmonary adenomatosis is also known as Jaagsiekte.
114. Myocardial infarction is one of the major causes of heart failure.
115. Biliary hyperplasia is characteristic of aflatoxicosis.
116. Dilatation of bronchus is known as brochiectasis.
117. Perivascular cuffing in brain is a microscopic lesion of rabies.
118. Fluid in pericardium is Hydrosalphinx.
119. Steatorrhoea is fat in stools.
120. Plasma cells are not found in blood.
121. The macrophages in circulating blood are the neutrophils.
122. Iatrogenic diseases are due to physicians.
123. A calcified thrombus in a vein is called as phlebolith.
124. Liprochrome are nothing but wear and tear pigment.
125. Keloid is an exuberant scar tissue.
126. Heart failure cells are seen in the alveoli of lungs in CVC.
127. Excessive destruction of RBCs may lead to haemorrhagic anemia.
128. Traumatic Pericarditis is always infectious.
129. Dilation of the chamber of the heart usually occurs in the left ventricle.
130. In red hepatization, a small cut-piece of lung sinks in water.

131. Otitis externa is the inflammation of the external ear.
132. Polio encephalitis is the inflammation of the grey matter of brain.
133. Incarceration is the trapping of intestines.
134. Trichobezoars are seen in cattle.
135. Epithelial crescents are seen in the glomeruli in chronic nephritis.
136. Goitre is neoplastic enlargement of the thyroid.
137. Glaucoma is due to decreased intraocular pressure.
138. Monster is an animal with a single eye.
139. Hypostatic congestion is most frequently seen in tail.
140. Red infarct may slightly protrude above the surrounding tissue.
141. A carbuncle is a deep abscess in subcutaneous tissue.
142. In the stage of fastigium in fever the cutaneous blood vessels are dilated.
143. Haemosiderin can be demonstrated in tissue by verhoeffs stain.
144. Dry gangrene sets in faster than moist gangrene.
145. In nerve cells only hyper plasia can take place and not hyper trophy.
146. Alteration in the constituents of blood may cause thrombosis.
147. Inflammatory exudates minimises destructive action of irritants by diluting it.
148. True pericarditis is always infectious.
149. Mulberry heart disease is caused by the deficiency of Vit. E and selenium.
150. Scirrhous cord is excessive granulation tissue formation on a severed spermatic cord.
151. Palatoschists is inflammation of soft palate.
152. Inflammation of hock joint is called coxitis.
153. Trichobezoars are frequently found in the large intestine of cattle.
154. Floating kidney, which is seen as a congenital anomaly, may be noticed in cats.
155. In cholemic nephritis proximal convoluted tubules contain choline.
156. Pericellular cirrhosis is encountered in Aflatoxicosis.
157. Parasis is complete immobilization of the body.
158. Leucocidins destroys leucocytes and prevents phagocytosis.
159. Fat phanerosis takes place when mitochondria of the cells are destroyed.
160. Moist gangrene is noticed in the extremities of the body.
161. Pressure on vein by ligature may lead on to general passive hyperaemia.
162. Neutrophils which has phagocytic property shows ability to multiply by mitosis.
163. The trephine theory of tissue healing proposes the effect of a growth stimulating substance.
164. Apoptosis is programmed cell death.
165. Pancreatic calculi consist of carbonates and phosphates of calcium and magnesium.
166. Liver flukes in cattle cause toxic jaundice.
167. Transudate has a high content of protein.
168. Anisocytosis is erythrocytic variation in size.
169. Phlebolith is stone formation in the vein.
170. Dilatation of heart usually takes place in left ventricle.
171. Basket cells aare ruptured immature lymphocytes.
172. Bull nose is hyperplasia of turbinate bones.
173. Exudation in alveoli is not a feature in Jaagsiekte.
174. Hepatosis dietetica in swine occurs due to deficiency of sulphur containing tocopherols.
175. Listeria monocytogenes causes early abortion in cattle.
176. Hemiplegia is paralysis of one side of the body.
177. Posthitis is the inflammation of glans penis.

178. Hydrophobia is a characteristic feature of rabies in animals and humans.
179. Spongiosis of brain is a characteristic lesion in scrapie.
180. Papilloma virus causes both benign and malignant neoplasms.
181. Caseation and calcification is a feature of bovine tuberculosis.
182. Mucosal cysts are formed in the intestine in blue tongue disease.
183. Transport of neoplastic cells along the transcoelomic surface is one method of spread of neoplasms.
184. Malta fever is a disease of goats and characterized by undulant fever.
185. Liver fluke infection predisposes to necrotic hepatitis in cattle.
186. Procarcinogens require metabolic activation to induce neoplasia.
187. Rabies virus is pantropic in nature which has affinity for different cell types in the body.
188. Bile duct hyperplasia along with liver lipidosis is a feature of ochratoxicosis.
189. Presence of microfilaria in blood indicates lung worm disease in canines.
190. Tetanus affected animals do not show specific gross lesions.
191. Surra is a trypanosomal disease of wild animals mainly.
192. Strongylus vulgaris causes verminous aneurysm in equines.
193. Chronic Vitamin A deficiency causes visceral gout in birds.
194. LL can be prevented by selecting genetically free strains of birds from the disease.
195. Fowl pox can be diagnosed by demonstration of intra cytoplasmic inclusions in the neuronal cells.
196. Athlete's posture with paralyzed legs is observed in neurogenic virulent form of NDV.
197. Newastle disease has zoonotic importance and causes mild transitory conjunctivitis in man.
198. MATSA is a tumour associated marker in lymphoid leucosis.
199. Gout always follows hyperuricaemia.
200. Ascites is common in birds reared at low altitudes.
201. Avian monocytosis is also known as pullet disease.
202. Periodic acid Schiff staining can be used to demonstrate the aspergillus fungal hyphae.
203. Clay-pipe appearance of bile duct is seen in Fascioliasis.
204. Oral lesions are very commonly observed in Caprine form of Rinderpest.
205. Hepatocytes show intra cytoplasmic inclusions in infectious canine hepatitis.
206. Incidence of horn cancer is higher in bullocks than in cows.
207. Lumpy jaw is the manifestation of Actinomycosis.
208. Diphasic fever is a peculiar sign of infectious canine hepatitis.
209. Black disease is always associated with liver fluke infection.
210. Haemoglobinuria is not an indication of Theileriasis.
211. Calcification is not a feature of avian tuberculosis.
212. Zebra striped appearance of rectum is the pathognomonic sign of swine fever.
213. Fibrinous perihepatitis is seen in Fowl cholera.
214. Airsacs are constantly deposited with cheesy material in CRD.
215. Intranuclear inclusions aare found in the tracheal epithelium in ILT.
216. Hepatic carcinoma is often the result of aflatoxicosis in ducks.
217. Young chicks are the main victims of Pullorum disease.
218. Neural involvement is a common feature of avian leucosis.
219. Pustule like lesions in pharynx and esophagus are due to the deficiency of Vitamin A.
220. Chastek paralysis is caused by Thiamine deficiency.
221. Traumatic ventriculitis means the traumatic injury in gizzard.
222. Haemorrhagic enteritis is the lesion of coccidiosis seen in rabbits.

223. In swine fever, button ulcers are characteristically seen in small intestine.
224. Spirocercosis produce osteosarcomas in esophagus.
225. Tigroid appearance of heart is commonly seen in Rinderpest.
226. Peyer's patches are exceptionally vulnerable in Rinderpest.
227. Haemoglobunuria is a pathognomonic symptom in Babesiosis.
228. Strongylus vulgaris causes aortic aaneurysm in bovines.
229. Actinobacillosis mainly affect the soft tissue like tongue.
230. Formation of vesiscles on the oral mucosa is commonly seen in Rinderpest.
231. In anthrax, dark colouration of blood is due to asphyxia.
232. In canine distemper, inclusion bodiess are seen only in hepatocytes.
233. "Curled toe paralysis" is caused by the deficiency of thiamine.
234. Balooning appearance of intestines is commonly seen in coccidiosis.
235. Gout frequently accompanies ochratoxcicosis.
236. MD is neoplastic in origin.
237. Diphtheritic ulcers are frequently observed in intestines of ND affected fowls.
238. Subcutaneous edema of the face and wattle in infectious coryza is due to accumulation of caseous material.
239. Vertical transmission is very common in Pullorum disease.
240. Egg peritonitis in layers is caused by *E.coli* organisms.
241. Coligranuloma is the feature of tuberculosis.
242. "Watery albumin" is the feature of the eggs laid by ILT affected layers.
243. Nasal polyps are the malignant tumors arising from the fibrous connective tissue.
244. Rinderpest produces oral lesions very commonly in sheep and goat.
245. Hepatocytes show intra cytoplasmic inclusions in infectious canine hepatitis.
246. Metastases occur by neurological route.
247. Lockjaw is the manifestation of Braxy disease.
248. Blue tongue disease can be transmitted by biting insects.
249. Black disease is always associated with liver fluke infection.
250. Scrapie is caused by prions.
251. Calcification is not a feature of avian tuberculosis.
252. Haemoglobunuria is a pathognomonic sign in babesiosis.
253. Muscular dystrophy is caused by the deficiency of vitamin D.
254. Citrinin toxicity causes watery diarrhoea among affected fowls.
255. Traumatic ventriculitis means the traumatic injury in gizzard.
256. Haemorrhagic enteritis is the lesion constantly seen in coccidiosis.
257. Inclusion body hepatitis is caused by Adeno virus.
258. Dwarfing of embryos is seen in infectious Laryngotracheitis as lesion in embryonating eggs.
259. High mortality is usually encountered in Infectious Bronchitis.
260. Capillaria annulata is found in the gizzard.
261. In lymphoid leucosis liver is markedly enlarged.
262. The sero types of Foot and Mouth Disease virus O, A and C are prevalent in India.
263. Lyssa bodies are tiny spherical bodies seen in the salivary gland of rabid animals.
264. Lameness due to pain in the coronary region in sheep is observed in Blue tongue.
265. Mouth lesion is a common feature of Rinderpest in sheep and goat.
266. In Tuberculosis of buffaloes calcification is not common.
267. Swollen, oedematous, dark brown muscle with gas formation is a characteristic lesion of malignant oederna.
268. Cattle affected by HS, exhibit cold, painless swelling of head, dewlap and neck.
269. Pseudo rabies is characterized by intense pruritis in pigs.

270. Most of the ascarids does not require an intermediate host for development.
271. Natural killer cells are capable of destroying tumour cells without specific sensitization.
272. Hyper vitaminosis A could lead on to decreased formation of CSF and drop in CSF pressure.
273. For the absorption of Vit.K bile salts are necessary.
274. Bracken fern could destroy thiamine.
275. Black tongue characterized by cyanosis of tongue is caused by a virus.
276. Intra nuclear inclusion bodies in the neurons is a specific lesion of avian encephalomyelitis.
277. Coryza is a chronic fibrinous inflammation of the mucous membrane of nasal passage with airsacculitis.
278. Fowl cholera is a disease transmitted by insect bite.
279. *Eimeria tenella* is more pathogenic than E. necatrix.
280. Blood sweating is a pathological condition noticed in hippopotamus.

KEY ANSWERS

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
F	T	F	F	F	T	F	T	T	F	F	F	T	F	T
16	17	18	19	20	21	22	23	24	25	26	27	28	29	30
T	F	F	T	F	F	T	T	F	F	T	T	T	F	T
31	32	33	34	35	36	37	38	39	40	41	42	43	44	45
T	F	F	F	F	T	T	F	F	T	T	T	T	F	T
46	47	48	49	50	51	52	53	54	55	56	57	58	59	60
T	F	F	F	F	F	F	T	F	T	T	F	T	F	F
61	62	63	64	65	66	67	68	69	70	71	72	73	74	75
T	F	T	F	F	T	F	T	F	F	T	F	F	T	T
76	77	78	79	80	81	82	83	84	85	86	87	88	89	90
F	T	T	T	T	T	T	T	T	T	F	F	T	F	T
91	92	93	94	95	96	97	98	99	100	101	102	103	104	105
F	T	T	T	F	F	T	F	F	F	T	T	T	T	F
106	107	108	109	110	111	112	113	114	115	116	117	118	119	120
F	T	T	T	F	F	F	T	T	T	T	T	F	T	T
121	122	123	124	125	126	127	128	129	130	131	132	133	134	135
F	T	T	T	T	T	F	F	F	T	T	T	T	T	F
136	137	138	139	140	141	142	143	144	145	146	147	148	149	150
F	F	T	F	T	F	T	F	T	F	T	T	T	T	T
151	152	153	154	155	156	157	158	159	160	161	162	163	164	165
F	T	F	T	F	T	T	T	F	F	F	T	T	T	F
166	167	168	169	170	171	172	173	174	175	176	177	178	179	180
F	F	T	T	F	F	F	T	T	T	T	F	T	T	T
181	182	183	184	185	186	187	188	189	190	191	192	193	194	195
T	F	T	F	F	T	F	F	T	T	F	T	T	T	F
196	197	198	199	200	201	202	203	204	205	206	207	208	209	210
F	T	F	T	F	T	T	T	F	F	T	T	F	T	T
211	212	213	214	215	216	217	218	219	220	221	222	223	224	225
T	F	T	T	T	T	T	F	T	T	F	F	F	T	F

226	227	228	229	230	231	232	233	234	235	236	237	238	239	240
T	T	F	T	F	T	F	F	T	T	F	T	T	T	T
241	242	243	244	245	246	247	248	249	250	251	252	253	254	255
F	F	F	F	F	F	F	T	T	T	T	T	F	T	T
256	257	258	259	260	261	262	263	264	265	266	267	268	269	270
T	T	F	F	F	T	T	F	T	F	T	T	T	F	T
271	272	273	274	275	276	277	278	279	280					
T	F	T	T	T	F	T	F	T	F					

IV. Match the following:

I)

1. Automobile accidents	a) Pinocytosis
2. Epitheloid cells	b) Rudolph Virchow
3. Liquefactive necrosis	c) Tuberculosis
4. Cell drinking	d) Old age
5. Senile atrophy	e) John Hunter
6. Father of cellular pathology	f) Mast cells
7. Langhan's giant cells	g) Fat emboli
8. Jaundice	h) Abscess
9. Experimental pathologist	i) Van den Bergh reaction
10. Metachromatic granules	j) Macrophages

Ans: 1. g 2. j 3. h 4. a 5. d
6. b 7. c 8. I 9. e 10. f

II)

1. Rubber jaw syndrome	a) Pachymeningitis
2. Aorta of cattle	b) Sialolith
3. Anisocytosis	c) Monday morning sickness
4. Duramater	d) Basophilic stippling
5. Wooden tongue	e) Cardiac tamponade
6. Cleft palate	f) Variation in size of RBCs
7. Azoturia	g) Canines
8. Hemopericardium	h) Oncocerca armillata
9. Salivary calculi	i) Cattle
10. Lead poisoning	j) Palatoschisis

Ans: 1. g 2. h 3. f 4. a 5. i
6. j 7. c 8. e 9. b 10. d

III)

1. Wiel's disease	a. Tetanus
2. Bang's disease	b. Canine distemper
3. Lumpy jaw	c. Brucellosis
4. Lock jaw	d. Mastitis in ewe
5. Carre's disease	e. Leptospirosis
6. Blue bag	f. Bacillus anthrasis
7. Bence Jones proteins	g. Actinomycosis
8. Mac Fadien's reaction	h. Basal cell carcinoma
9. Rodent ulcer	i. Scrtoli – cell tumor
10. Feminizing tumor	j. Multiple Myeloma

Ans: 1. e 2. c 3. g 4. a 5. b
6. d 7. j 8. f 9. h 10. i

IV)

1. Bronze coloured liver	a. Marek's disease
2. Haemorrhages and erosions in the trachea	b. Ranikhet disease
3. Sports man posture	c. Leechi disease
4. Hydro pericardium with enlarged heart	d. EDS-76
5. Hemorrhages on proventricular papillae	e. Avian encephalomyelitis
6. Kidneys enlarged with white chalky deposits	f. Infectious laryngotracheitis
7. Whitish nodules in the lungs of chicks	g. Fowl typhoid
8. Loss of egg shell pigment and shell less eggs	h. Mushy chick disease
9. Young chicks with tremors of head and neck	i. Gout
10. Unabsorbed and infected yolk with Omphalitis	j. Brooder pneumonia

Ans: 1. g 2. f 3. a 4. c 5. b
6. I 7. j 8. d 9. e 10. h

V)

1. Eosinophils	a) Inflammation of caecum
2. Melena	b) Fusion of Macro phases
3. Epithelial metaplasia	c) Frozen section
4. Experimental Pathology	d) Blood in stools
5. Hemoptysis	e) Horse
6. Hydropic degeneration	f) Vitamin A deficiency
7. Sialolith	g) Blisters on skin
8. Cryostat	h) Parasitic infestation
9. Giant cell	i) Julius cohnheim
10. Typhlitis	j) Blood in sputum

Ans: 1. h 2. d 3. f 4. i 5. j
6. g 7. e 8. c 9. b 10. a

VI)

1. Cleft palate	a) Laterals curvature of spine
2. Emphysema	b) Aflatoxin
3. Metrocele	c) Aspiration pneumonia
4. Pyosalpinx	d) Diffuse amyloidosis
5. Bacon spleen	e) Leukemia
6. Pernicious anaemia	f) Ruptured alveoli
7. Hepatotoxic	g) Belching of gas through mouth
8. Eructation	h) Dilatation of group of blood vessels
9. Telangiectasis	i) Pus formation on oviduct
10. Scoliosis	j) Mucopurulent vaginal discharge

Ans: 1. c 2. f 3. j 4. i 5. d
6. e 7. b 8. g 9. h 10. a

VII)

a. Nasal granuloma	1. Nasal polypoid granulomatopus lesions
b. Rhinosporidiosis	2. Microscopic granulomas in all tissues
c. Ehrlichiosis	3. Necrotizing myocarditis in young
d. Theileriasis	4. Haemorrhagic zebra markings
e. Cysticercus cellolosae	5. Corrugative lesions in intestine
f. Equine tuberculosis	6. Nodules in the external nares
g. Paratuberculosis	7. Koch blue bodies
h. Brucellosis	8. Severe thrombocytopenia
i. Foot and mouth disease	9. Proliferative granulomatous lesions
j. Rinderpest	10. Measly pork

Ans: a. 6 b. 1 c. 8 d. 7 e. 10
f. 9 g. 5 h. 2 i. 3 j. 4

VIII)

a) Dirofilaria immitis	1. Mast cells
b) Alcian blue	2. Precancerous stage
c) Nutmeg liver	3. Myxoma
d) Amyloidosis	4. Trephones
e) Mucoid degeneration	5. Epistaxis
f) Bleeding from nose	6. Sagospleen
g) Dysplasia	7. Lipochromes
h) Wound hormones	8. Embolism
i) Brown atrophy of heart	9. C.V.C.
j) Histamin	10. Mucin

Ans: a) 8 b) 10 c) 9 d) 6 e) 3
f) 5 g) 2 h) 4 i) 7 j) 1

IX)

a) Blue babies	1. Heaves
b) Chronic alveolar emphysema	2. Foramen ovale
c) Lead poisoning	3. Oncocerca armilata
d) Pericellular cirrhosis	4. Fibrinous pericarditis
e) Bread & butter appearance	5. Bloat
f) Urolithiasis	6. Basophilic stippling
g) Atheroselerosis	7. Hydronephrosis
h) Amyelia	8. Faulty drenching
i) Gangrenous pneumonia	9. Absence of spinal cord
j) Choke	10. Aflatoxicosis

Ans: a) 2 b) 1 c) 6 d) 10 e) 4
f) 7 g) 3 h) 9 i) 8 j) 5

X)

a) Urate crystal deposition	1. Thrombus
b) Intravital intravascular clot	2. Carbon particles
c) Heart failure cells	3. Fat
d) Anthracosis	4. Stiffening of muscles
e) Typhlitis	5. Alveolar macrophages with hemosiderin pigments
f) Osmic acid	6. Haemorrhage in brain
g) Rigor mortis	7. Gout
h) Apoplexy	8. Inflammation of caecum
i) Inflammation of testes	9. Hypovolaemic shock
j) Loss of blood	10. Orchitis

Ans: a) 7 b) 1 c) 5 d) 2 e) 8
f) 3 g) 4 h) 6 i) 10 j) 9

XI)

a) Mulberry heart disease	1. Calcification in heart and aorta
b) Thrush breast/tigeroid heart	2. Haemosiderin laden alveolar macrophages
c) Anthracosis	3. Deficiency of Vitamin B12
d) Bacon spleen	4. Leukaemia
e) Pernicious anaemia	5. Diectectic microangiopathy
f) Heart failure cells	6. Fatty change in heart
g) Manchester wasting disease	7. Diffuse amyloidosis
h) Oncogenic retrovirus	8. Exogenous pigmentation
i) Ranula	9. Predisposes to tuberculosis
j) Silicosis	10. Mucocele of sublingual region

Ans: a) 5 b) 6 c) 8 d) 7 e) 3
f) 2 g) 1 h) 4 i) 10 j) 9

XII)

1. Haemosiderin	a) Lines of Zahn
2. Cyclops	b) Extensive burns
3. Mucin	c) Periodic acid Schiff's stain
4. Thrombus	d) Fatty change
5. Shock	e) Pearl's stain
	f) Fusion of eyes

Ans: 1. e 2. f 3. c 4. a 5. b

XIII)

1. Hydrocephalus	a) Bloat
2. Rickets	b) Alcohol
3. Brooder pneumonia	c) Vit.A deficiency
4. Cirrhosis	d) Vit.D deficiency
5. Saponins	e) Iodine deficiency
	f) Aspergillosis

Ans: 1. c 2. d 3. f 4. b 5. a

XIV)

1. Rudolph Virchow	a) Sago spleen
2. Brisket disease	b) Fixative
3. Anthracosis	c) Hyaline degeneration
4. Eosinophils	d) Frost bite
5. Jaundice	e) Aortic aneurysm
6. Excessive cold	f) Allergic inflammation
7. White muscle disease	g) Father of cellular pathology
8. *Spirocerca lupi*	h) Carbon particle
9. Amyloidosis	i) Vanden Bergh test
10. Formalin	j) High altitude

Ans: 1. g 2. j 3. h 4. f 5. i
6. d 7. c 8. e 9. a 10. b

XV)

1. Hemopericardium	a) Blue babies
2. Epistaxis	b) Two hearts
3. Incarceration	c) Salivary cyst
4. Hydrosalphinx	d) Intestinal adhesions
5. Cryptochidism	e) Miller's disease
6. Ranula	f) Viral inflammation
7. Osteodystrophia fibrosa	g) Accumulation of blood in the pericardial sac
8. Patency of foramen ovale	h) Fluid in the oviduct
9. Diplocardia	i) Hidden testicle
10. Inclusion bodies	j) Nasal bleeding

Ans: 1. g 2. j 3. d 4. h 5. i
6. c 7. e 8. a 9. b 10. f

XVI)

1. Thrush breast heart	a) Fatty changes
2. Microphages of Metchnikoff	b) Viral inflammation
3. Hypovitaminosis A	c) Hydronephrosis
4. Melena	d) Muscular hyaline
5. Uroliths	e) Tuberculin
6. Cicatrix	f) Neutrophils
7. Inclusion bodies	g) Patent foramen ovale
8. Equine azoturia	h) Metaplasia
9. DSelayed hypersensitivity reaction	i) Bleeding in stools
10. Paradoxical emboli	j) Final stage of wound healing

Ans: **1. a** **2. f** **3. c** **4. i** **5. h**
6. j **7. b** **8. d** **9. e** **10. g**

XVII)

1. Raineys corpuscles	a) Savco sporidiosis
2. Punctate basophilia	b) Abortion
3. Pearly disease	c) Coenurus cerebralis
4. Necrotic placentitis	d) Congenital anomaly
5. White spotted kidney	e) Lead poisoning
6. Sturdy	f) Inflammation of stifle joint
7. Ectopia cardis	g) Tuberculous peritonitis in cattle
8. Kyphosis	h) Young animals
9. Gonitis	i) E. Coli
10. Green stick fracture	j) Upward curvature of the spine

Ans: **1. a** **2. e** **3. g** **4. b** **5. i**
6. c **7. d** **8. j** **9. f** **10. h**

XVIII)

1. Brisket disease	a) Congenital transmission
2. Granulation tissue	b) Inhalation of cement dust
3. Bacillary white diarrhoea	c) Fatty degeneration
4. Phlegmon	d) Decreased atmospheric pressure
5. Chalicosis	e) Rh negative bfactor
6. Tabby cat heart	f) Foetal mal formation
7. Erythroblastosis foetalis	g) Proliferating angioblasts and fibroblast
8. Tatooing	h) Eosinophilia
9. Hay fever	i) Exogenous pigmentation
10. Teratogen	j) Diffuse suppurative inflammation of connective tissue

Ans: **1. d** **2. g** **3. a** **4. j** **5. b**
6. c **7. e** **8. i** **9. h** **10. f**

XIX)

1. Poly cythemia vera	a) Leucocytosis
2. Microcytic hypochromic anaemia	b) Dilatation of group of blood vessels
3. Eructation	c) Addisons disease
4. Traumatic pericarditis	d) Spermatic cord
5. Telangiectasis	e) Neoplastic increase in erythrocytes
6. Hypo adrenocorticism	f) Lateral curvature of spine
7. Funiculitis	g) Iron deficiency
8. Maries disease	h) Bracken fern
9. Scoliosis	i) Belching of gas
10. Bovine enzootic hematuria	j) Pulmonary osteo arthopathy

Ans: 1. e 2. g 3. i 4. a 5. b
6. c 7. d 8. j 9. f 10. h

XX)

1. Sertoli-cell tumour	a) Surra
2. Basal cell carcinoma	b) Intra nuclear basophilic inclusions
3. Squamous cell carcinoma	c) Clostridium perfringens
4. Histocytoma	d) Lock jaw
5. Rinderpest	e) Zebra markings
6. Infectious canine hepatitis	f) Cell nest
7. Canine distemper	g) Venereal tumour
8. Tetanus	h) Feminising tumour
9. Trypanosomiasis in horses	i) Rodent ulcer
10. Pulpy kidney disease	j) Intra nuclear and intra cytoplasmic inclusion bodies

Ans: 1. h 2. i 3. f 4. g 5. e
6. b 7. j 8. d 9. a 10. c

XXI)

1. IBD	a) Haemorrhages in muscles
2. RD	b) Plasmodium gallinacum
3. Coccidiosis	c) Leucocytozoon sp.
4. Sulpha toxicity	d) Salmonella pullorum
5. Fowl malaria	e) Salmonella gallinarum
6. Blood smear examination	f) Bursitis
7. Bronze coloured liver	g) Haemorrhagic proventriculitis
8. Bacillary white diarrhoea	h) Haemorrhagic enteritis
9. Curled toe	i) Vit. E deficiency
10. Crazy chick disease	j) Fibrinous pericarditis
11. E. coli infection	k) Toxic hepatitis
12. Aflatoxicosis	l) Lipotrophic factors
13. Mareks disease	m) Clostridial infections
14. Leukosis	n) Vit B2 deficiency
15. Gangrenous dermatitis	o) Big liver disease
16. FLHS	p) Sciatic nerves thickening

Ans: 1. a 2. g 3. h 4. f 5. b 6. c 7. e 8. d
9. n 10. i 11. j 12. k 13. p 14. o 15. m 16. l

XXII)

1. Canine distemper	a) Haemorrhagic enteritis
2. Coccidiosis	b) Wet film
3. Actinobacillosis	c) Rubarth's disease
4. Trypanosomiasis	d) Hog cholera
5. Theileriasis	e) Langhan's giant cell
6. ICH	f) Hard pad disease
7. Gangenous mastitis	g) Wooden tongue
8. Squamous cell carcinoma	h) Koch's blue bodies
9. Turkey egg kidney	i) Blue bag
10. Tuberculosis	j) Keratin pearls

Ans: 1. f 2. a 3. g 4. b 5. h
6. c 7. i 8. j 9. d 10. e

XXIII)

1. Rickets	a) Hepatic carcinoma
2. Fowl typhoid	b) Calcium
3. Pullorum disease	c) Hypovitaminosis-E
4. Avian encephalomalacia	d) Fowl cholera
5. Citrinin toxicity	e) Button ulcer in intestine
6. Newcastle disease	f) Soft shelled eggs
7. Necrotic hepatitis	g) Bronzed liver
8. Crazy chick disease	h) White diarrhoea
9. Hypocalcemia	i) Epidemic tremor
10. Aflatoxicosis	j) Watery diarrhoea

Ans: 1. b 2. g 3. h 4. i 5. j
6. e 7. d 8. c 9. f 10. a

XXIV)

1. Prions	a) Blind staggers
2. Equine encephalitis	b) Non-purulent encephalitis
3. Black quarter	c) Zebra markings
4. Aujeszkey's disease	d) Acid fast staining
5. Swine fever	e) Giant cell tumor
6. Rinderpest	f) Scrapie
7. Canine Distemper	g) Gangrenous myositis
8. Tuberculosis	h) Button ulcers
9. Ascariasis	i) Panleukopenia
10. Osteoclastoma	j) Milk spots

Ans: 1. f 2. a 3. g 4. b 5. h
6. c 7. i 8. d 9. j 10. e

XXV)

1. Vent pecking	a) Biotin
2. Aflatoxicosis	b) Chlamydiosis
3. Fowl cholera	c) Typhilitis
4. Salpingitis	d) Petechiae in proventriculus
5. Ascites	e) Choline
6. Perosis	f) Vices
7. ND	g) Hepatic carcinoma in ducks
8. Paratyphoid	h) Pasteurellosis
9. Intracytoplasmic bodies	i) Colibacillosis
10. Sudden death syndrome	j) Hypoprotenaemia

Ans: 1. f 2. g 3. h 4. i 5. j
6. a 7. d 8. c 9. b 10.

XXVI)

1. Canine distemper	a) Hydrophobia
2. Rabies	b) Blind staggers
3. Actinobacillosis	c) Rubarth's disease
4. Equine encephalitis	d) Rodent's ulcer
5. FMD	e) Milk spots
6. ICH	f) Hard pad disease
7. Gangenous mastitis	g) Wooden tongue
8. Basal cell carcinoma	h) Panters
9. Habronemiasis	i) Blue bag
10. Ascariasis	j) Summer sores

Ans: 1. f 2. a 3. g 4. b 5. h
6. c 7. i 8. d 9. j 10. e

XXVII)

1. Hypocalcemia	a) Pericellular cirrhosis
2. Fowl typhoid	b) Perosis
3. Pullorum disease	c) Crazy chick disease
4. Avian encephalomalacia	d) Fibrinous pneumonia
5. Egg peritonitis	e) Button ulcer in intestine
6. Newcastle disease	f) Soft shelled eggs
7. Fowl cholera	g) Bronzed liver
8. Hypovitaminosis-E	h) White diarrhoea
9. Choline deficiency	i) Epidemic tremor
10. Aflatoxicosis	j) Salpingitis

Ans: 1. f 2. g 3. h 4. i 5. j
6. e 7. d 8. c 9. b 10. a

XXVIII)

1. Intestinal coccidiosis	a) Calcium deficiency
2. Exudative diathesis	b) Avian monocytosis
3. Soft-shelled eggs	c) Aflatoxicosis
4. Pullet disease	d) Ranikhet disease
5. Biliary hyperplasia	e) Ochratoxin
6. Caecal tonsillitis	f) Avian coccidiosis
7. Haemorrhagic typhlitis	g) *E. necatrix*
8. Carcinogenic nephrotoxin	h) Hypovitaminosis E
9. Polyoneuritis	i) Cobalt deficiency
10. Iodine deficiency	j) Fowl typhoid
	k) Goitre
	l) Thiamine deficiency
	m) *E. tenella*

Ans: 1. g 2. h 3. a 4. b 5. c
6. d 7. m 8. e 9. l 10. k

XXIX)

1. Glanders	a) Arteritis
2. Theileriasis	b) Spleenomegaly
3. Swine fever	c) Gangrenous myositis
4. Anthrax	d) Interstitial nephritis
5. Black Quarter	e) Lesions in brain
6. Enterotoxemia	f) Granulomatous lesions
7. Leptospirosis	g) Punched out ulcers in nasal septum
8. Equine encephalomyelitis	h) Button ulcers in large intestine
9. Tuberculosis	i) Pulpy kidney
10. Blue tongue	j) Abomasal ulcers

Ans: 1. g 2. j 3. h 4. b 5. c
6. i 7. d 8. e 9. f 10. a

XXX)

1. Sulphur granules	a) Botryomycosis in horse
2. Over eating disease	b) Ascariasis in pigs
3. Rabies	c) Clostridium botulinum type A
4. Turkey egg appearance	d) Sarcosporidiosis
5. Staphylococcus aureus	e) Polyuria and glycosuria
6. Limber neck	f) Actinomycosis
7. Immature amphistomiasis	g) Swine fever
8. Thumps	h) Peritonitis and pleuritis
9. Rainey's corpuscles	i) Enterotoxaemia
10. Nocardiosis	j) Bottle jaw

Ans: 1. f 2. i 3. e 4. g 5. a
6. c 7. j 8. b 9. d 10. h

XXXI)

1. Hepatosis dietetica	a) Hypo magnesemia in adult cattle
2. Choline	b) Iron deficiency
3. 7 Dehydro cholesterol	c) Trans ovarian transmission
4. Grass tetany	d) Psittacosis
5. Achlor hydria	e) Deficiency of Vit.E
6. Bacillary white diarrhoea	f) Enlargement and mottling of spleen
7. Kissing disesase	g) Vitamin D
8. Councilman bodies	h) Methionine
9. Spirochetosis	i) Mycosis of digestive tract
10. Thrush	j) Yellow fever in primates

Ans: 1. e 2. h 3. g 4. a 5. b
6. c 7. j 8. d 9. f 10. i

CHAPTER 8
VETERINARY PARASITOLOGY

I. Choose the correct answer:

1. 'Grub' refers to
   a) *Tabanus* sp.
   b) *Musca* sp.
   c) *Echidnophaga* sp.
   d) None of the above

2. Chequered abdomen is a feature of
   a) *Musca* sp.
   b) *Calliphora* sp.
   c) *Sarcophaga* sp.
   d) *Hippobosca* sp.

3. *Pseudolynchia* sp. of flies prefer to attack
   a) Adult male pigeons
   b) Adult female pigeons
   c) Nestling pigeons
   d) None of the above

4. *Menopon gallinae* is commonly known as
   a) Stick-tight flea of poultry
   b) Wing louse of poultry
   c) Body louse of poultry
   d) Shaft louse of poultry

5. Nasal myiasis is a common feature in
   a) Cattle
   b) Sheep
   c) Dog
   d) Horse

6. The 'spinose ear tick' often will be parasitic on
   a) Cattle
   b) Sheep
   c) Horses
   d) All the above

7. Mature larva of Gasterophilus possess
   a) Dark bands
   b) Posterior step-like projection
   c) Prolegs
   d) Spines

8. 'Tiger mosquito' is
   a) *Culex pipiens*
   b) *Anopheles maculipennis*
   c) *Aedes aegypti*
   d) *Aedes albopictus*

9. Transmission of kala-azar is dependent upon the population and biology of
   a) Sand flies
   b) Biting midges
   c) Horse flies
   d) Black flies

10. Select the fly responsible for mechanical transmission of *Trypanosoma evansi* from among the following
   a) *Anopheles* sp.
   b) *Stomoxys* sp.
   c) *Lucilia* sp.
   d) *Hippobosca* sp.

11. Presence of ornamentations on scutum is a characteristic feature of hard ticks of genus
   a) *Boophilus* sp.
   b) *Hyalomma* sp.
   c) *Haemaphysalis* sp.
   d) *Amblyomma* sp.

12. Dorsally situated anus is a feature which help in the identification of mites of genus
    a) *Sarcoptes* sp.
    b) Psoroptes
    c) *Demodex* sp.
    d) Notoedres

13. One among the following is not a mode of asexual reproduction; spot it.
    a) Budding
    b) Sporulation
    c) Binary fission
    d) Multiple fission

14. A broad spectrum chemotherapeutic agent efficient in the treatment of several bacterial diseases as well as protozoal diseases is
    a) Fenbendazole
    b) Antrycide
    c) Sulpha
    d) Diminazine

15. Transtadial transmission of parasites is a common feature in the case of
    a) Babesia
    b) Trypanosoma
    c) Theileria
    d) Anaplasma

16. *Trypanosoma equiperdum* causes
    a) Surra
    b) Nagana
    c) Sleeping sickness
    d) Dourine

17. Felines are final hosts for
    a) Eimeria & Isospora
    b) Isospora & Haemoproteus
    c) Haemoproteus & Toxoplasma
    d) Isospora & Toxoplasma

18. *Eimeria zuernii* is a parasite affecting
    a) Cattle
    b) Dog
    c) Fowl
    d) Turkey

19. Leishman-Donovan bodies are
    a) Promastigotes
    b) Amastigotes
    c) Trypomastigotes
    d) Epimastigotes

20. Intermediate hosts for *Sarcocystis miescheriana*
    a) Dog
    b) Cattle
    c) Pig
    d) Horse

21. *Anaplasma marginale* is
    a) Pathogenic protozoa
    b) Non-pathogenic protozoa
    c) Pathogenic rickettsia
    d) Non-pathogenic rickettsia

22. Drug of choice in the treatment of rickettsial diseases is
    a) Oxytetracycline
    b) Metronidazole
    c) Diminazine aceturate
    d) Parvaquone

23. Blue tongue virus in sheep is transmitted by
    a) *Anopheles* sp. of mosquitoes
    b) *Culex* sp. of mosquitoes
    c) *Aedes* sp. of mosquitoes
    d) *Culicoides* sp.

24. Dermanyssus gallinae is a
a) Fowl flea
b) Fowl tick
c) Poultry mite
d) Wing louse of poultry

25. The ventral plates are absent in
a) Male ticks
b) Male and female ticks of *Boophilus* sp.
c) Male ticks of *Haemaphysalis* sp.
d) Male ticks of *Hyalomma*

26. Biting lice are grouped in the order
a) Mallophaga
b) Anoplura
c) Siphonaptera
d) Diptera

27. The pupa of *Tabanus* sp. is
a) Exarate
b) Obtectate
c) Coarctate
d) Apodus

28. Wings of flies of the genus *Haematopota* are
a) Banded
b) Mottled
c) Spiny
d) Clear

29. "Butcher's jelly" in cattle is caused by
a) Larvae of *Hypoderma* sp.
b) Larvae of Lucilia sp.
c) Imago of Hypoderma sp.
d) Imago of Lucilia sp.

30. Pygidium is an organ seen in
a) Blow flies
b) Bed bugs
c) Lice
d) Fleas

31. Mouth parts of Tabanid flies are adapted for
a) Biting
b) Sponging
c) Biting and sponging
d) Piercing and sucking

32. Chequered abdomen is a feature of
a) Blow fly
b) Forest fly
c) House fly
d) Flesh fly

33. A relationship in which both partners benefit from association usually obligatory, with a high degree of physiological dependency is
a) Mutualism
b) Symbiosis
c) Commensalism
d) Phoresis

34. Establishment of tick as a vector was by
a) Laveran
b) Ronald Ross
c) Smith and Kilborne
d) Linnaeus

35. Organism that prey on several different hosts or same host at several discrete times are called
a) Specific parasite
b) Micropredators
c) Spurious parasite
d) Protelean parasite

36. Parasite completing its lifecycle in one host is
a) Monoxenous
b) Euryxenous
c) Heteroxenous
d) None of the above

37. Arrested development of juvenile helminthes in definitive host awaiting favourable conditions for further development is
a) Diapause
b) Hypobiosis
c) Hibernation
d) Biotic potential

38. The fringed tapeworm is
a) *Avitellina centripunctata*
b) *Thysanosoma actinoides*
c) *Thysaniezia giardi*
d) *Avitellina lahorea*

39. Morocco leather appearance of abomasums is due to
a) *Haemonchus contortus*
b) *Ostertagia ostertagia*
c) *Cooperia* spp.
d) *Paealooperia* spp.

40. In Ascarid lifecycle the infective stage is
a) L_3
b) Egg with L_2
c) Unembryonated egg
d) Egg with L_3

41. Drug of choice for acute fascioliosis is
a) Triclabendazole
b) Diamphenithide
c) Albendazole
d) Fenbendazole

42. Redial stage is absent in
a) *Schistosoma nasale*
b) *Paragonimus westermanni*
c) *Ophisthorchis tenuicollis*
d) *Paeamphistomum ceric*

43. Temporary relationship between two organisms, wherein one organism transports another without any metabolic dependence is
a) Symbiosis
b) Mutualism
c) Phoresy
d) Commensalism

44. Knott's technique is used for the examination of
a) Blood
b) Nasal discharge
c) Skin scraping
d) Faeces

45. Composite egg is seen in
a) Nematodes
b) Trematodes
c) Cestodes
d) Protozoa

46. Among the following a chemical used for permanent mounting of parasites is
a) Ercosote
b) Carbolic acid
c) Canada balsam
d) Clove oil

47. Host harbouring sexual stage of parasite is
a) Carrier host
b) Definitive host
c) Transport host
d) Intermediate host

48. Immunity to superinfection due to the presence of residual parasite is termed
a) Acquired immunity
b) Innate immunity
c) Premunity
d) Sterile immunity

49. Parasites with two or more hosts are
a) Hyperparasite
b) Heteroxenous
c) Monoxenous
d) Stenoxenous

50. A parasite which lead a parasitic way of life only for a short period during its life span is
a) Temporary parasite
b) Aberrant parasite
c) Obligatory parasite
d) Permanent parasite

51. Feeding colostrum to young calves is an example of attaining
a) Passive immunity
b) Active immunity
c) Innate immunity
d) None of the above

52. A quantitative faecal examination procedure involving a special counting chamber
a) Stoll's technique
b) Willi's technique
c) Lane's technique
d) Mc Master technique

53. Method of transmission of the causative agent of Surra or animal Trypanosomosis by Tabanid flies is an example for
a) Contamination
b) Ingestion
c) Biological transmission
d) Mechanical transmission

54. Host specificity of parasites is also an indication of
a) Innate immunity
b) Passive immunity
c) Premunity
d) None of the above

55. Most suitable technique to diagnose endoparasitism associated with gastro-intestinal tract is
a) Direct unstained smear technique
b) Direct stained smear technique
c) Sedimentation technique
d) McMaster technique

56. From the following groups of parasites, pick the one with a direct life cycle
a) Filarid worms
b) Fleas
c) Flukes
d) Tapeworms

57. An increase in number of cells of an organ affected by parasites without a corresponding increase in size of the cells is termed as
a) Hypertrophy
b) Metaplasia
c) Hyperplasia
d) Neoplasia

58. The phenomenon of premunity is an example of
a) Innate resistance
b) Active immunity
c) Passive immunity
d) None of the above

59. Pick the group of parasites which undergo metamorphosis in their life cycle
a) Tapeworms
b) Roundworms
c) Trypanosomes
d) Lice

60. Generally when an animal is affected by endoparasites the situation is termed
a) Infection
b) Infestation
c) Mutualism
d) Disease

61. The larval form of *Taenia multiceps* is
a) *Cysticercus cellulosae*
b) *Coenurus cerebralis*
c) *Cysticercus tenuicollis*
d) Hydatid

62. Hour glass shaped oesophagus is characteristic of
a) *Ascaris suum*
b) *Heterakis gallinarum*
c) *Oxyuris equi*
d) *Ascaridia galii*

63. Visceral larva migrans in children is due to
a) *Ancylostoma caninum*
b) *Toxocara vitulorum*
c) *Ascaris suum*
d) *Toxocara canis*

64. Land snails act as first intermediate host for the important members of the family
a) Schistosomatidae
b) Anopiocephalidae
c) Heterakiidae
d) Dicrocoelidae

65. Coracidium feature in the life cycle of
a) Cyclophyllidean tapeworm
b) Monogenetic trematode
c) Pseudophyllidean tapeworm
d) Digenetic trematode

66. Final host for *Taenia solium* is
a) Cattle
b) Pig
c) Man
d) Dog

67. *Moniezia benedeni* is a parasite of
a) Dog
b) Cattle
c) Fowl
d) Horse

68. Which is the infective stage of a strongylid nematode
a) Egg
b) Miracidium
c) Second stage larva
d) Third stage larva

69. *Schistosoma nasale*, a blood fluke in nasal vein of cattle, was discovered by
a) Dr. M.A.N. Rao
b) Dr. Anantaraman
c) Dr. C.T. Peter
d) Dr. Bhalerao

70. The method used for separation of non-migratory larvae is called as
a) Petri dish culture
b) Bottle culture
c) Baermann's Technique
d) Harada-Mori Test tube culture

71. An organism, which harbours and nourishes the parasite is
a) Host
b) Vector
c) Predator
d) Hyper parasite

72. An organism which parasitizes an organ which is not its natural habitat
a) Incidental parasite
b) Ectopic/Aberrant/Erratic parasite
c) Accidental parasite
d) Occasional parasite

73. As per ICZN, while writing the scientific names, the words should be
a) Italicized
b) Stroked
c) Bolded
d) None

74. Reproduction by young or larval forms of parasites is known as
a) Parthenogenesis
b) Paedogenesis
c) Metagenesis
d) Heterogenesis

75. Incidence of disease occurring only occasionally in one (or) a few animals in a village
a) Epizootic
b) Sporadic
c) Pandemic
d) Enzootic

76. Pick the group of parasites with indirect life cycle from the following
a) Ascarid worms
b) Fleas
c) Filarid worms
d) Strongylid worms

77. Pick the one among the following which can be designated as a permanent parasite
a) Mosquito
b) Blow fly
c) Lice
d) House fly

78. The smallest taxon in the system of zoological classification is
a) Genus
b) Family
c) Species
d) Sub-species

79. Technique used to recover non-migrating larvae of nematodes from the dung is
a) Petridish method
b) McMaster technique
c) Baerman's technique
d) Willi's technique

80. The most common preservative used in a Parasitology laboratory is
a) 40% formalin
b) 10% formalin
c) 20% formalin
d) 5% formalin

81. Fleas are
a) Permanent ectoparasites
b) Obligate temporary parasite
c) Facultative parasites
d) Aberrant parasites

82. Life cycle of mosquito is generally completed in
a) 25 days
b) 17 days
c) 7 days
d) 65 days

83. 'GAVAC' is a commercially available vaccine to control
a) Dog ticks
b) Dog fleas
c) Cattle ticks
d) Cat fleas

84. Canine Babesiosis is transmitted by ticks of the genus
a) Boophilus
b) Haemaphysalis
c) Rhipicephalus
d) None of the above

85. 'Sensilium' is an organ seen in
a) Tabanid flies
b) Mosquitoes
c) Lice
d) Fleas

86. 'Licked beef' is a condition caused by
a) Calliphorine larvae
b) Muscid larvae
c) Warble flies larvae
d) Mosquito larvae

87. Powerful claws on legs are a feature of
a) Musca
b) Culex
c) Chrysomyia
d) Hippobosca

88. Mature cyst of *Entamoela coli* possess
a) 4 nuclei
b) 2 nuclei
c) 8 nuclei
d) No nucleus

89. The protozoan parasite which multiplies inside macrophages is
a) Plasmodium
b) Trypanosoma
c) Babesia
d) Leishmania

90. Dogs are .....hosts for *Sarcocystis cruzi*
a) Accidental
b) Intermediate
c) Transport
d) Final

91. The stage of coccidial parasite detected on the fresh droppings of affected fowl is
a) Egg
b) Unsporulated oocyst
c) Sporulated oocyst
d) None of the above

92. The most important final host for *Toxoplasma gondii* is
a) Cat
b) Dog
c) Goat
d) Pig

93. The only proven drug effective in eliminating theilerial organisms from body of host is
a) Halofuginon
b) Buparvaquone
c) Quinapyramine
d) Oxytetracycline

94. Abortion in bovine trichomonosis occur in
a) Early pregnancy
b) Mid pregnancy
c) Late pregnancy
d) None of the above

95. 'Bots' are
a) Larvae of mosquito
b) Larvae of *Calliphora* sp.
c) Larvae of *Oestrus* sp.
d) Larvae of *Gasterophilus* sp.

96. Syngamy in protozoa is followed by
a) Sporogony
b) Budding
c) Gametogony
d) Merogony

97. Canine Babesiosis is transmitted by
a) *Rhipicephalus sanguineus*
b) *Tabanus striatus*
c) *Boophilus annulatus*
d) *Rhipicephalus bursa*

98. Buffaloes act as reservoir host for
a) *Trypanosoma evansi*
b) *Trichomonas foetus*
c) *Theileria annulata*
d) *Balantidium coli*

99. *Toxoplasma gondii* causes abortion in
a) Horse
b) Cattle
c) Sheep
d) Dog

100. Balantidium coli is a
a) Haemoflagellate
b) Ciliate
c) Sporozoan
d) Rickettisia

101. Travellers diarrhoea is caused by
a) *Giardia lamblia*
b) *Eimeria arloingi*
c) Cryptosporidium sp
d) *Toxoplasma gondii*

102. Tetracycline is the drug of choice for
a) Trypanosomosis
b) Theileriosis
c) Amoebosis
d) Babesiosis

103. Organism which merely carries a part of the immature, non developing phase of parasite to another host is
a) Paratenic host
b) Transport host
c) Intercalary host
d) Reservoir host

104. Direct lifecycle is seen in
a) Trematodes
b) Cestodes
c) Nematodes
d) All of the above

105. Blood smears are stained using
a) Acetic alum carmine
b) Giemsa
c) H & E
d) Methanol

106. Host tissue reaction to parasite where transformation of cell type takes place is
a) Metaplasia
b) Hyperplasia
c) Hypertrophy
d) Atrophy

107. IgE mediated response is common in
a) *Theileria annulata*
b) *Haemonchus contortus*
c) Coccidia
d) Gyptosporidia

108. Baermann's technique is used in
a) Migratory type of larvae
b) Non-migratory type of larvae
c) Egg counting technique
d) Sporulation of oocysts

109. Sudden outbreak of a disease among animals is
a) Enzootic
b) Epizootic
c) Panzootic
d) Endemic

110. Type of reproduction in *Entamoeba* sp. is
a) Binary fission
b) Sporulation
c) Multiple fission
d) Budding

111. 'Koch's blue body' is .....of theilerial parasite.
a) Gametocyte
b) Schizont
c) Trophozoite
d) Sporozoite

112. Abortion in chronic cases is a feature observed in cows suffering from
a) Theileriosis
b) Anaplasmosis
c) Coccidiosis
d) Amoebiosis

113. 'Tricin' test is employed in the diagnosis of
a) Trypanosomosis in cattle
b) Sarcocystosis in pigs
c) Trichomoniosis in cattle
d) Coccidiosis in poultry

114. Omnivores are the common hosts for
a) *Entamoeba histolytica*
b) *Balantidium coli*
c) *Ehrlichia canis*
d) *Eimeria zuernii*

115. A systemic anthelmintic
a) Sulpha
b) GAVAC
c) Niclosamide
d) Ivermectin

116. Significant class of antibody involved in helminth infection
a) IgA
b) IgE
c) IgG
d) IgM

117. Nodular taeniosis occur in
a) Cattle
b) Cat
c) Poultry
d) Pig

118. Strobilocercous (larval stage) occurs in
a) Sheep
b) Dog
c) Chicken
d) Rat

119. Hemiptera are
a) Mites
b) Bugs
c) Lice
d) Fleas

120. An antichitin agent
a) Azadirachtin
b) Methoprene
c) Ivermectin
d) Diflubenzuron

121. Redmite of poultry
a) Demodex sp.
b) Psoroptes sp.
c) Dermanyssus sp.
d) None

122. The first deworming in calf is advised on
a) 30 -45 days
b) 8-14 days
c) 3 months
d) First week

123. A non-burrowing mite
a) Demodex
b) Sarcoptes
c) Psoroptes
d) Notoedres

124. Species of Babesia affecting cattle recorded from Kerala
a) *B. divergens*
b) *B. bovis*
c) *B. zuerni*
d) *B. bigemina*

125. *Triatoma rubrofasciata* are vectors of
a) Chagas disease
b) Surra
c) No vector
d) Leishmaniosis

126. Natural hosts of *Balantidium coli* are
a) Man
b) Cattle
c) All animals
d) Pigs

127. The sarcocysts are microscopic when the intermediate host is
a) Dog
b) Carnivores
c) Cat
d) Always

128. The Trypanosoma sp. transmitted by veneral route is
a) *T. equiperdum*
b) *T. melophagi*
c) *T. cruzi*
d) *T. theileri*

129. Necrotic lesions in the liver of turkey poults is seen in
a) Coccidiosis
b) Bird malaria
c) Histomonosis
d) Haemoproteus

130. An extraintestinal coccidian is
a) *E. alabamensis*
b) *E. necatrix*
c) *E. stiedae*
d) *E. zuerni*

131. Ballooning of intestine in poultry is due to
a) *E. necatrix*
b) *E. tenella*
c) *E. acervulina*
d) *E. brunette*

132. Halter shaped gametocytes are seen in
a) Toxoplasma
b) Histomonas
c) Theileria
d) Haemoproteus

133. Kinyoun's acid fast staining is used to detect
a) Entamoeba
b) Giardia
c) Histomonas
d) Cryptosporidium

134. The clinical material used to detect tongue worm infection is
a) Blood
b) Nasal discharge
c) Fecal sample
d) Biopsy

135. Sparganum is
a) Cysticercoid
b) Procercoid
c) Stobilocercus
d) Plerocercoid

136. An example of a parasite showing parthenogenesis
a) Strongyle
b) Damalinia
c) Tetrameres
d) None of them

137. Which is the infective stage of *Dipylidium caninum*?
a) Cysticercoid
b) Cysticercus
c) Strobilocercus
d) Tetrathyridium

138. Black disease is a complication in sheep due to
a) Chronic fasciolosis
b) Acute fasciolosis
c) Acute amphistomosis
d) Chronic amphistomosis

139. TICKGARD is a _____ vaccine
a) Attenuated
b) Live
c) Frozen
d) Recombinant DNA

140. The source of infection of amphistomes to cattle is
a) Aquatic snails
b) Land snails
c) Vegetation
d) Water

141. Drug of choice for ascarid infections
a) Pyrantel
b) Piperazene
c) Mebendazole
d) Ivermectin

142. Paracox is a chicken coccidian vaccine developed from
a) Irradiated oocysts
b) Precocious strains
c) Wild strains
d) Recombinant technology

143. Permanent mounts of Entamoeba cysts are prepared by staining with
a) Giemsa stain
b) Acid fast stain
c) Carmine stain
d) Haidenhaem iron hematoxylin stain

144. Fecal matter mixed with blood and mucus in an adult cow indicates
a) Fasciolosis
b) Toxocarosis
c) Schistosomosis
d) Strongylosis

145. Swelling of parotid glands in cattle is a feature of
a) *Ehrlichia bovis*
b) *Anaplasma bovis*
c) *A. marginale*
d) *Theileria annulata*

146. Ingestion of infected ticks results in
a) Babesiosis
b) Anaplasmosis
c) Ehrlichiosis
d) Hepatozoonosis

147. Infectious immunity is otherwise called as
a) Acquired immunity
b) Passive immunity
c) Premunity
d) Natural immunity

148. _____ is a host parasite relation
a) Symbiosis
b) Mutualism
c) Phoresy
d) Parasitism

149. Paedogenesis is found in the life cycle of
a) Fasciola
b) Strongyle
c) Moneizia
d) Mite

150. OPG means
a) Ova per gram
b) Oocyst per gram
c) Both
d) None of them

151. Founder of Parasitology
a) Donovan
b) Akiba
c) Smith
d) Reddi

152. Disease due to Trichinella is called as
a) Trichinosis
b) Trichinellasis
c) Trichinellosis
d) Trichinelliosis

153. _____ is a live vaccine
a) Pirodog
b) Dictol
c) Coccivac
d) Coxabic

154. Most suitable control measure against parasites include
a) Pasture management and vaccination
b) Pasture management and chemotherapy
c) Pasture management, vaccination and chemotherapy
d) Vaccination and chemotherapy

155. Anopheles means
a) Intruder
b) Hateful
c) Miserable
d) Annoying

156. One Recombinant vaccine
a) Babesan
b) Tickgard
c) Anaplaz
d) Difil

157. Anthelmintic resistance is detected by
a) ELISA
b) HA
c) LAT
d) FECRT

158. Shuttle programme is advised in birds to avoid
a) Wastage
b) Stress
c) Drug resistance
d) All of them

159. Male Strongyle worms specifically possess
a) Large buccal capsule
b) Leaf crowns
c) Bursa
d) Alae

160. A pour on formulation
a) Flumethrin
b) Allethrin
c) Permethrin
d) All of them

161. A sense organ in an amphistome cercarium
a) Oral sucker
b) Eye spots
c) Tail
d) Glands

162. Bottle jaw in fasciolosis indicates _____ infection
a) Acute
b) Chronic
c) Grave
d) Non pathogenic

163. Immature amphistomes are generally termed
a) Plug feeders
b) Red flukes
c) Plump flukes
d) Seed flukes

164. Emulsifying agent used for the detection of Schistosoma eggs
a) Water
b) Normal saline
c) Alkali
d) Acid

165. Ceracaria with short stumpy tail is
a) Furcocercous
b) Microcercous
c) Xiphidiocercous
d) Pleurolophocercous

166. Crab is the 2nd intermediate host of
a) Lung fluke
b) Oviduct fluke
c) Liver fluke
d) Rumen fluke

167. *Bivitellobilharzia nairi* is a _____ of elephants
a) Stomach fluke
b) Liver fluke
c) Lung fluke
d) Blood fluke

168. Measly beef is associated with
a) Man
b) Pig
c) Goat
d) Sheep

169. Infective stage of Diphyllobothrium is
a) Coracidium
b) Plerocercoid
c) Egg
d) Fish

170. Dogs with louse/flea infestations are likely to suffer from
a) Taeniosis
b) Echinococcosis
c) Dipylidiosis
d) Sparganosis

171. Apolysis is found in
a) Moniezia
b) Raillietina
c) Dipylidium
d) All the above

172. Drug of choice for canine tapeworms
a) Praziquantel
b) Niclosamide
c) Bithionol
d) Copper sulphate

173. Red worms of equine are
a) Strongyle
b) Strongyloides
c) Strongylus
d) Metastrongyles

174. A spirurid of poultry
a) Acuaria
b) Tetrameres
c) Gongylonema
d) All the above

175. Bursatee is a condition of horses seen in
a) Oxyuriosis
b) Strongylosis
c) Habronemosis
d) Parascarosis

176. Rodents and cockroaches act as transport hosts in
a) Stehanurosis
b) Ancylostomosis
c) Ascaridiosis
d) Dictocaulosis

177. _____ helps in the dissemination of eggs/larvae of lung worms of cattle
a) Rain
b) Flood
c) Birds
d) Pilobolus

178. A genetic predisposition is found in
a) Demodicosis
b) Tick toxicosis
c) Sheep scab
d) Scabies

179. GAVAC is available in
a) USA
b) India
c) Cuba
d) Australia

180. Scaly leg is caused by
a) *Cnemidocoptes mutans*
b) C. gallinae
c) Dermanyssus
d) Liponyssus

181. Bont tick is
a) Hyalomma
b) Aponomma
c) Amblyomma
d) Nosomma

182. Boophilus spp. prevalent in Kerala
a) *B. annulatus*
b) *B. decoloratus*
c) *B. bovis*
d) *B. microplus*

183. Brown dog tick transmits
a) Babesiosis
b) Ehrlichiosis
c) Hepatozoonosis
d) All the above

184. Mosquito pupae are called as
a) Chiggers
b) Tumblers
c) Wrigglers
d) Nits

185. Antenna is beaded in
a) Mosquitoes
b) Black fly
c) Punkies
d) House fly

186. Mouth parts are baton like in
a) Tabanus
b) Chrysops
c) Hippobosca
d) Stomoxys

187. Wings are banded across in
a) Tabanus
b) Chrysops
c) Haematopota
d) Liperosia

188. Vomit drops are ejected by house flies
a) To liquify food
b) To solidify food
c) To favor digestion
d) To repel other flies

189. Butcher's jelly is as a result of
a)Sarcocystosis
b) Measly beef
c) Warbles
d) Sarcophaga

190. *Pseudolynchia maura* found in pigeons is a
a) Louse
b) Flea
c) Tick
d) Fly

191. Thorax is telescoped in
a) Sheep ked
b) Stick tight flea
c) Dog fly
d) Bot fly

192. Biopesticides are applied in _____ doses
a) High b) Moderate
c) Low d) Nano quantities

193. Name one biopesticide from the following
a) Methoprene b) Deltamethrin
c) Ash d) Tar

194. *Linguatula serrata* is known as
a) Lapet worm b) Lymph worm
c) Tongue worm d) Tough worm

195. Hemimetabolic life cycle is seen in
a) Fly b) Louse
c) Flea d) Tick

196. One of the following is a blow fly
a) *Calliphora vomitoria* b) *Chrysops dispar*
c) *Sarcophaga dux* d) *Haematopota pluriatis*

197. Entamoeba fecal smears are fixed in Schaudinn's fixative containing
a) Bromine b) Lead
c) Iodine d) Mercury

198. Heamatocrit method is used for the detection of
a) Babesia b) Ehrlichia
c) Trypanosomes d) All the above

199. Giardia cysts in smears are identified microscopically from
a) Flagella b) Chromatoid bodies
c) Nuclei d) Costa

200. Posterior extremity of *Trypanosoma vivax* is
a) Bulbous b) Blunt
c) Pointed d) Truncated

201. African trypanosomes are transmitted by
a) Tabanus b) Chrysops
c) Glossina d) Otobius

202. *Trypanosoma evansi* infection is usually chronic in
a) Camel b) Dog
c) Tiger d) Pig

203. Stages of leishmanial organisms in the macrophages are
a) Trypomastigotes b) Epimastigotes
c) Amastigotes d) Promastigotes

204. Immunological test for detecting *Tritrichomonas spp.* in cattle
a) Thymol test
b) Tricin test
c) Trypanolysin test
d) Monte Negro test

205. Anaemia in anaplasmosis is due to
a) Hemolysis
b) Dyshemopoiesis
c) Internal bleeding
d) Erythrophagocytosis

206. Toxoplasma tissue cyst contains
a) Tachyzoites
b) Bradyzoites
c) Phanirozoites
d) Sporozoites

207. Syzygy is found in the life cycle of
a) Haemobartonella
b) Histomonas
c) Haemoproteus
d) Hepatozoon

208. A nematode transmitted protozoan is
a) Haemobartonella
b) Histomonas
c) Haemoproteus
d) Hepatozoon

209. *Sarcocystis neurona* is found in the _____ of horse
a) Muscle
b) Intestine
c) Brain
d) Liver

210. Massive abortions in cattle as reported recently from the USA are due to
a) Neospora caninum
b) Toxoplasma gondii
c) Babesia bovis
d) Theileria parva

211. Infective stage of *Entamoeba histolytica* is
a) Uninucleate cyst
b) Trophozoite
c) Binucleate cyst
d) Quadrinucleate cyst

212. Most pathogenic Eimeria spp. in cattle is
a) E. bovis
b) E. zuernii
c) E. cylindrica
d) E. subspherica

213. *Eimeria brunetti* in fowls is located in the
a) Duodenum
b) Ileum
c) Rectum
d) Jejunum

214. Cryptosporidium oocysts are stained by
a) Ziel Neelson stain
b) Gram's stain
c) Carmine
d) H&E stain

215. Signet ring forms of Babesia observed in the RBC are typical of
a) *B. bovis*
b) B. gibsoni
c) B. canis
d) B. bigemina

216. A specific post mortem lesion of theileriosis is
a) Cirrhosis
b) Emphysema
c) Pneumonia
d) Abomasal ulcers

217. Drug of choice for theileriosis
a) OTC
b) Halofuginone
c) Buparvaquone
d) Berenil

218. Hepatitis cysticercosa is caused by
a) *Cysticercus cellulosae*
b) *C. bovis*
c) *C . tenuicollis*
d) Coenurus

219. The intermediate hosts for *Thelazia* sp is
a) *Musca* sp
b) Mosquitoes
c) Molluscs
d) *Sarcophaga*

220. Drug of choice for ascarid infection in neonatal pups is
a) Albendazole
b) Praziquantel
c) Pyrantel pamoate
d) Oxyclozanide

221. Uterine bell is seen in
a) *Macrocanthorhynchus sp*
b) *Mullerius sp*
c) *Moniezia sp*
d) *Multiceps sp.*

222. Cercaria of *Dicrocoelium dentriticum* is
a) Xiphidio cercariae
b) Furcocercous
c) Microcercous
d) Gymnocephalous

223. Pseudapolysis is shown by
a) *Diphyllobothrium latum*
b) *Dipyllidium caninum*
c) *Dicrocoelium dentriticum*
d) *Davainea proglottina*

224. Granulomatous reaction seen in chronic helminthic infections is usually
a) Type I hypersensitivity
b) Type II hypersensitivity
c) Type III hypersensitivity
d) Type IV hypersensitivity

225. Parasites are
a) Prokaryotes
b) Eukaryotes
c) Both A&B
d) Amphikaryotes

226. Microscopic metacestodes are
a) Cysticercoid
b) Cysticercous
c) Dithyridium
d) Coenurus

227. Praziquantel is used against
a) Cestodes
b) Schistosomes
c) Both a & b
d) Nematodes

228. The snail host of *Fasciola hepatica* is
a) Amphibian
b) Aquatic
c) Nocturnal
d) Periodic

229. Strobilocercous is the bladder worm of
a) *Taenia hydatigena*
b) *Taenia taeniformis*
c) *Taenia multiceps*
d) *Taenia solium*

230. Diamond's medium is for culturing
a) *Leishmania*
b) *Trypanosoma*
c) *Trichomonas*
d) *Entamoeba*

231. The first parasitic protozoan identified was
a) *Giardia lamblia*
b) *Entamoeba histolytica*
c) *Leishmania tropica*
d) *Eimeria stiedae*

232. Solid immunity occurs in
a) *Babesia bigemina*
b) *Theileria parva*
c) *Trypanosoma vivax*
d) *Leishmania tropica*

233. Obligatory two host life cycle is seen in
a) *Sarcocystis cruzi*
b) *Toxoplasma gondii*
c) *Neospora caninum*
d) *Isospora canis*

234. Montenegro's test is used to diagnose
a) Leishmanosis
b) Amoebiosis
c) Trypanosiomosis
d) Trichomonosis

235. The main cutaneous myasis producer in Kerala is
a) *Lucilia cuprina*
b) *Chrysomia megacephala*
c) *Caliphora erythrocephala*
d) *Chrysomia bezziana*

236. *Theileria* is transmitted by
a) *Hyaloma anatolicum*
b) *Haemaphysalis bispinosa*
c) *Rhipicephalus sanguineus*
d) *Boophilus annulatus*

237. Chagas disease is transmitted by
a) *Cimex*
b) *Sarcoptes*
c) *Triatoma*
d) *Boophilus*

238. The most important mode of infection of *Toxocara vitulorum* in calves is
a) Direct
b) Transplacental
c) Transmammary
d) Paratenic host

239. A stenoxenous parasite is
a) Ctenocephalides
b) *D.latum*
c) Fasciola
d) Eimeria sp.

240. Concomitant immunity has been observed in
a) Fasciola
b) Ancylostoma
c) Schistosoma
d) Moniezia

241. The gravid segments are motile in
a) *Taenia solium*
b) *T. saginata*
c) *D. latum*
d) All the above

242. The relationship between rumen protozoa and their host is
a) Commensalism
b) Mutualism
c) Symbiosis
d) Parasitism

243. One of the latest elucidated life cycle was that of
a) *Fasciola*
b) *Plasmodium*
c) *Toxoplasma*
d) *Neospora caninum*

244. In the classification of nematodes Strongylida is a
a) Class
b) Family
c) Phylum
d) Order

245. Diapause is a phenomenon observed in
a) Strongyles
b) Tapeworms
c) *Trichuris*
d) Schistosomes

246. Paedogenesis occurs in
a) *T. solium*
b) *D. latum*
c) *T. multiceps*
d) Moniezia sp.

247. Life cycle of cestodes is direct except in
a) Moneizia
b) Taenia
c) Avitellina
d) Hymenolepis

248. Premunity is seen in
a) Babesia
b) Theileria
c) Toxoplasma
d) All of them

249. Budding is seen in
a) Babesia
b) Theileria
c) Anaplasma
d) Taenia

250. The locomotion of Toxoplasma is of
a) Pseudopodial
b) Ciliary
c) Flagellar
d) Gliding

251. Who coined the term self cure?
a) Stoll
b) Dubey
c) Miller
d) Soulsby

252. There are three testes in
a) Hymenolepis
b) Taenia
c) Davainea
d) Amphistome

253. A temporary parasite
a) Lice
b) Fleas
c) Mosquito
d) Tick

254. The infective stage of *D. latum*
a) Cercaria
b) Metacercaria
c) L3
d) Pleurocercoid

255. An OP compound used orally
a) Zolone
b) Diclorvos
c) Malathione
d) DDT

256. An injectable anthelmintic
a) Pyrantel
b) Febantel
c) Levamisole
d) Tetramisole

257. A test for measuring AR
a) Willi's test
b) Lane's method
c) LDA
d) EPG

258. ..... is a pyrethrum compound
a) Sumithione
b) Achook
c) Cypermethrin
d) Neem

259. A repellant
a) Oil of citronella
b) Neem oil
c) Pyrethroids
d) All of them

260. The infective stage of Railleitina is
a) Cysticercus
b) Coenures
c) Cysticercoid
d) Strobilocercus

261. Wonder drug against parasites
a) Pyrantel
b) Ivermectin
c) Piperazene
d) Fenbendazole

262. A morphological feature of Spirocerca is
a) One lip
b) Two lips
c) Three lips
d) No lips

263. A prominent sign in the infection of *Dipylidium caninum* in dogs
a) Diarrhoea
b) Rectal straining
c) Anal pruritis
d) Starry coat

264. The lesions seen in Onchocerca infection in cattle are called as
a) Chagomas
b) Worm nodules
c) Granulomas
d) Worm nests

265. Can microfilaria "unsheath" in the circulation?
a) Never
b) Definitely
c) Rarely
d) Occasionally

266. The vectors of dirofilariosis include
a) Mosquitoes
b) Dogs
c) Both of them
d) None of them

267. The strongyle with the largest egg
a) Haemonchus
b) Cooperia
c) Nematodirrus
d) Strongylus

268. Gullet worm of cattle has
a) Balloonets
b) Bosses
c) Bursa
d) Braces

269. Gape worm is seen in Thrissur in ..... breeds
a) Backyard
b) Broiler
c) Exotic
d) Game

270. A protozoan transmitted by the caecal worm of poultry
a) Trichomonas
b) Histoplasma
c) Histomonas
d) Toxoplasma

271. Self cure is demonstrated in
a) *Haemonchus contortus*
b) Trichostrongylus
c) Both
d) None

272. The lesion found in Ostertagiosis is described as
a) Morocco leather appearance
b) Pearly type
c) Worm nodules
d) Tiger skin appearance

273. The bursa in Mecistocirrus is described as
a) Spanner shaped
b) Scissor shaped
c) Pincer shaped
d) Spoon shaped

274. Broad fish tapeworm has a .....uterine pore
a) Lateral
b) Bilateral
c) Dorsal
d) Midventral

275. Cysticercoid is the intermediary stage of
a) Monezia
b) Diplopodium
c) Babesia
d) Diphyllobothrium

276. Neurocysticercosis is diagnosed by
a) Coproplogy
b) Coproculture
c) MRI
d) All of them

277. Trematode infection is highly prevalent in ducks as they ingest
a) Snails
b) Insects
c) Water lilies
d) Fishes

278. Infective stage of snoring disease is
a) Metacercaria
b) L3 stage
c) Cercaria
d) Vegetation

279. Snoring disease is not prominent in buffaloes because they are
a) Resistant
b) Natural hosts
c) Temporary hosts
d) Erractic hosts

280 .....stage of amphistomes is pathogenic
a) Adult
b) Mature
c) Juveniles
d) L3

281. Drug of choice for tape worm infections in dogs
a) Praziquantel
b) Albendazole
c) Fenbendazole
d) Copper sulphate

282. Tse-tse fly transmit
a) Trypanosomes
b) Babesia
c) African Trypanosomes
d) Leishmania

283. Transmission is posterior station in .....vector
a) Tabanus
b) Stomoxys
c) Heterodoxus
d) Reduvid bug

284. Drug used in flea collars
a) Cypermethrin
b) Pyrimidine
c) Amitraz
d) Disophenol

285. Mottled wing is seen in
a) Tabanus
b) Chrysops
c) Mosquitoe
d) Haematopota

286. Mouth parts of Musca has
a) Teeth
b) Pseudotracheal tubes
c) Grooves
d) Mandibles

287. ..... is produced by heaping the manure
a) Heat
b) Co2
c) Ammonia
d) Heat and ammonia

288. Organisms survive in the proboscis of ..... for just 15 min
a) Musca
b) Tabanus
c) Liperosia
d) Haematopota

289. Common name for *Sarcophaga dux* is
a) Flesh fly
b) Muscle fly
c) Market fly
d) Bazaar fly

290. Common name of *Peseudolynchia maura* is
a) Pigeon fly
b) Pigeon louse
c) Pigeon flea
d) Pigeon bug

291. *Melophagus ovinus* is
a) Pupiparous
b) Larviparous
c) Oviparous
d) Ovoviviparous

292. The tick causing tick paralysis
a) Ixodes
b) Hyaloma
c) Haemaphysalis
d) Boophilus

293. A tickicide used as pour on
a) Asuntol
b) Flumethrin
c) Cypermethrin
d) Delatamethrin

294. A tick with ornamentations
a) Amblyoma
b) Hyaloma
c) Boophilus
d) Ixodes

295. Demodex is .....shaped
a) Cylindrical
b) Cigar
c) Siphon
d) Spoon

296. Demodex is transmitted by
a) Contact
b) Ingestion
c) Inhalation
d) All the above

297. A mite of rabbits
a) Psoroptes
b) Notodres
c) Both
d) None of the above

298. A mite of pigs
a) Sarcoptes
b) Psoroptes
c) Demodex
d) All of them

299. Scaly leg in poultry is due to
a) Demodex
b) Cnemidocoptes
c) Sarcoptes
d) Ornithonyssus

300. Poultry ticks are difficult to collect as they are
a) Small
b) Fast running
c) Nocturnal
d) Die soon

301. Red mites of poultry are
a) Argas
b) Dermanyssus
c) Ornithonyssus
d) Liponyssus

302. Tampan is a
a) Louse
b) Flea
c) Tick
d) Fly

303. A biopesticide
a) Amitraz
b) Achook
c) Lemon grass oil
d) Pyrethrum

304. An OP compound which is a contact poison
a) Malathione
b) Sumithione
c) Phosalone
d) Fenchlorvos

305. Developmental stage of a trypanosome is called as
a) Mastigote
b) Manogote
c) Metragote
d) Megagote

306. Paracox is a ..... type of vaccine
a) Live attenuated
b) Tissue culture
c) Molecular vaccine
d) Precocious vaccine

307. Nucleus is vesicular with an endosome in
a) Coccidia
b) Babesia
c) Entamoeba
d) All of them

308. Leishmania is seen as..... in vertebrate hosts
a) Amastigotes
b) Promastigotes
c) Epimastigotes
d) Trypomastigotes

309. Lesions found in entamoebosis are
a) Flask shaped ulcers
b) Amoeboma
c) Peritonitis
d) All of them

310. Reservoir host in visceral leishmaniosis in India
a) Dog
b) Rodents
c) Gerbils
d) None of them

311. A non specific serological test for trypanosomosis
a) Monte Negro immunological test
b) Formol gel test
c) ELISA
d) IFAT

312. The shortest trypanosome
a) *T. evansi* b) *T. congolense*
c) *T.vivax* d) *T. cruzi*

313. Saucer shaped ulcers found in
a) Entamoeba b) Histomonas
c) Trichomonas d) Heterakis

314. Mode of transmission in *Hepatozoon canis*
a) Tick bite b) Ingestion of tick
c) Contact d) Iatrogenic

315. Sexual reproduction occurs in Babesia life cycle in ticks
a) Yes b) No
c) Sometimes d) Not confirmed

316. The largest coccidia of cattle
a) *Eimeria zuernii* b) *E.bovis*
c) *E.cylindrica* d) *Isospora bovis*

317. Long term use of amprolium results in .....in sheep and goats
a) Thiamine deficiency b) Liver toxicity
c) Allergy d) All of them

318. Toxoplasma gondii is a ..... parasite
a) Obligatory b) Facultative
c) Temporary d) Erratic

319. Cytomeres are seen in .....infection
a) Hepatozoon b) Haemoproteus
c) Histomonas d) Heterakis

320. Schizonts are ..... shaped in Haemoproteus infection
a) Gelatin capsule b) Halter shaped
c) Flask shaped d) Saucer shaped

321. Maltese cross appearance is specific of
a) Babesia bovis b) *Nuttalia equi*
c) Babesia canis d) *Babesia ovis*

322. *Theileria orientalis* merozoites are .....shaped
a) Rod shaped b) Coma shaped
c) Ring forms d) Oval shaped

323. QBC is done to detect .....organisms
a) Hexamita b) Plasmodium
c) Anaplasma d) Leucocytozoon

324. Infective stage of Giardiosis in man
a) Uninucleate cyst
b) Binucleate cyst
c) Quadrinucleate cyst
d) All of them

325. Test of choice for toxoplasmosis
a) ELISA
b) IFAT
c) MAT
d) IHA

326. Tracker dog disease is due to
a) Ehrlichia canis
b) Anaplasma canis
c) A. phagocytophilia
d) A. Ondirri

327. Vector for *T. evansi* is
a) Triatoma
b) Mosquitoe
c) Tabanus
d) Culicoides

328. Immunity in Schistosomosis is
a) Premunity
b) Concomitant immunity
c) Innate immunity
d) Maternal immunity

329. An example for a stenoxenous parasite
a) Coccidia
b) *Toxoplasma*
c) *Trypanasoma evansi*
d) *Echinococcus*

330. Paedogenesis is seen in
a) *Strongyloides sp.*
b) *Moneizia sp.*
c) *Paramphistomum sp.*
d) *Ascaris sp*

331. The naming of animal parasitic diseases is as per
a) SNOAPAD
b) ICZN
c) Binomial nomenclature
d) ICBN

332. Solenocytes in flat worms are
a) Respiratory organelles
b) Excretory organelles
c) Reproductive organelles
d) Circulatory organelles

333. An example for a protelean parasite
a) *Oestrus ovis*
b) *Anopheles stephensi*
c) *Pseudolynchia maura*
d) *Melophagus ovinus*

334. The scientist who described the self cure phenomenon
a) Dubey
b) Norman Stoll
c) Theobald Smith
d) Ronald Ross

335. First recombinant vaccine
a) Coccivac
b) Dictol
c) Rakshavac
d) Tickgard

336. Conjugation as a form of sexual reproduction is seen in
a) *Entamoeba* b) *Trypanasoma*
c) *Balantidium* d) *Histomonas*

337. Redia stage is present in
a) *Dicrocoelium* b) *Schistosomes*
c) *Prostogonimus* d) *Paragonimus*

338. A cestode having direct lifecycle
a) *Moneizia* b) *Hymenolepis*
c) *Taenia* d) *Anoplocephala*

339. An example for parasitic cyclozoonosis
a) Amobiosis b) Leishmaniosis
c) Taeniosis d) Schistosomosis

340. The scientist who discovered *Neospora caninum*
a) Tyzzer b) Theobald Smith
c) F.L.Kilbourne d) J.P.Dubey

341. The phenomenon of hepatic shift is seen in
a) Amphistomosis b) Schistosomosis
c) Echinococcosis d) Fascioliosis

342. *Hepatozoon canis* gamonts are seen in
a) Neutrophils b) Lymphocytes
c) Monocytes d) RBCs

343. The infective stage in *Ascaris suum*
a) L_3 b) Egg with L_3
c) L_2 d) Egg with L_2

344. Tetrathyridium is the metacestode stage of
a) Thysanasoma b) Anoplocephala
c) Mesocestoides d) Thysaniezia

345. Mode of action of Levamisole
a) Prevents glucose uptake by cells b) Potentiates GABA
c) Spastic paralysis of worms d) Flaccid paralysis of worms

346. The parasite of a particular species of host found in the dung of another species
a) Obligatory parasite b) Facultative parasite
c) Aberrant parasite d) Spurious parasite

347. An example of a chitin synthesis inhibitor used for controlling insects
a) Methoprene b) Fenoxycarb
c) Lufenuron d) Altosid

348. Type of association in which there is no metabolic dependence
a) Symbiosis
b) Mutualism
c) Commensalism
d) Phoresy

349. Autoinfection is seen in
a) *Taenia ovis*
b) *T. solium*
c) *T. saginata*
d) *Echinococcus granulosus*

350. Infective stage of Acanthocephalid worm
a) Acanthor
b) Egg with larvae
c) Acanthella
d) Cystacanth

351. Technique used for culturing of *Dictyocaulus* larvae
a) Mcmaster technique
b) Baermanns technique
c) Stolls technique
d) Harada Mori technique

352. Arrow headed worm of felines
a) *Gnathostoma spinigerum*
b) *Spirocerca lupi*
c) *Toxocara cati*
d) *Toxascaris leonina*

353. Thread worms in ruminants are
a) *Setaria* digitata
b) *Strongyloides papillosus*
c) *Oesophagostomum radiatum*
d) *Trichostrongylus colubriformis*

354. Pharyngeal pouch is a feature of
a) *Fasciola hepatica*
b) *Pseudodiscus collinsi*
c) *Prosthogonimus*
d) *Paragonimus westermani*

355. Uterine bell is a feature of
a) *Macrocanthorynchus*
b) *Mullerius sp*
c) *Mecistocirrus sp.*
d) *Metastrongylus* sp

356. Single spiculed nematode of dog
a) *Ancylostoma caninum*
b) *Toxocara canis*
c) *Spirocerca lupi*
d) *Dioctophyma renale*

357. Drug of choice for acute fasciolosis is
a) Ivermectin
b) Praziquantel
c) Thiabendazole
d)Triclabendazole

358. Chicken act as transport host for
a) *Ascaridia galli*
b) *Spirocerca lupi*
c) *Syngamus trachea*
d) *Stephanurus dentatus*

359. Intermediate host of *Cysticercus tenuicollis* is
a) Dog
b) Wolf
c) Sheep
d) Horse

360. Cutting plates and subventral lancets are a feature of
a) *Strongylus vulgaris* b) *Bunostomum trigonocephalum*
c) *Ascaris suum* d) *Dictyocaulus viviparous*

361. Socks shaped spicules are seen in
a) *Haemonchus contortus* *b) Dictyocaulus viviparous*
c) *Metastrongylus apri* d) *Stephanurus dentatus*

362. Nodular taenosis in poultry is caused by
a) *Raillietina tetragona* b) *Raillietina echinobothrida*
c) *Raillietina cesticillus* d) *Davainea proglottina*

363. Nematode larvae recovered from the lung of pigs are
a) *Mullerius sp* b) *Metastrongylus sp.*
c) *Dictyocaulus sp.* d) *Protostrongylus sp.*

364. Bursal rays of strongyles are
a) Modified spicules b) Modified caudal alae
c) Modified genital papillae d) Modified caudal papillae

365. *Moniezia expansa* is a parasite of
a) Fowl b) Goat
c) Horse d) Dog

366. Vulval flap is seen in
a) *Dictyocaulus filari* b) *Ascaris suum*
c) *Haemonchus contortus* d) *Dicrocoelium dendriticum*

367. Coracidium is a feature in the life cycle of
a) Monogenetic trematodes b) Digenetic trematodes
c) Cyclophyllidean cestode d) Pseudophyllidean cestode

368. Fringed tape worm occurring in sheep
a) *Stilesia globipunctata* b) *Stilesia hepatica*
c) *Thysaniezia giardi* d) *Thysanosoma actinoides*

369. Ovoviviparous nematode of dog
a) *Ancylostoma caninum* b) *Toxocara* canis
c) *Dioctophyma renali* d) *Strongyloides stercoralis*

370. Spring rise phenomenon in sheep is seen in
a) *Setaria* b) *Haemonchus*
c) *Stilesia* d) *Thelazia*

371. Slime balls are associated with
a) Schistosome b) Amphistomes
c) Dicrocoelium d) Moniezia

372. Swamp Cancer is a pathological condition seen in
a) *Oesophagostomum sp.*
b) *Habronema sp.*
c) *Trichostrongylus sp.*
d) *Strongylus vulgaris*

373. Eye worm of dog
a) *Thalezia rhodesi*
b) *T.lachrimalis*
c) *T.callipeda*
d) *T.callifornensis*

374. Geohelminths are
a) *Metastrongylus apri*
b) *Dictyocaulous viviparous*
c) *Protostrongylus rufescens*
d) *Stephanurus dentatus*

375. Musca act as intermediate host for
a) *Setaria cervi*
b) *Draschia megastoma*
c) *Habronema majus*
d) *Brugia malayi*

376. Nodular typhilitis is seen in
a) *Ascaridia galli*
b) *Heterakis gallinae*
c) *Eimeria tenella*
d) *Davainea proglottina*

377. The average number of eggs laid by a hard tick will be
a) 200
b) 800
c) 2000
d) 10,000

378. Genital opening is in the anterior half of the body in
a) *Trichodectes*
b) *Argas*
c) *Tabanus*
d) *Linognathus*

379. *Oestrus ovis* is a
a) Biting fly
b) Licking fly
c) Sucking fly
d) Biting and sucking fly

380. The nymphs of *Cnemidocoptes gallinae* are found in
a) Combs
b) Feathers
c) Earlobes
d) Feather follicles

381. Larvae of *Gasterophilus* are found in
a) Nasal discharge
b) Dung
c) Urine
d) Pus

382. Altosid is a
a) Chemosterilant
b) Hormone analogue
c) Pyrethroid
d) Amidine

383. Gamma rays damage the insect's
a) Nervous tissue
b) Sensory organs
c) Gonads
d) Digestive system

384. In Chigger mites the parasitic stage is
a) Adult
b) Protonymph
c) Deutonumph
d) Larva

385. Insect with obtectate pupa is
a) *Simulium*
b) *Musca*
c) *Hippobosca*
d) *Stomoxys*

386. Ecdysones are
a) Juvenile hormones
b) Moulting hormones
c) Insecticides
d) Chemosterilant

387. Biting lice are grouped in the order
a) Mallophaga
b) Anoplura
c) Siphonoptera
d) Diptera

388. Ventral plates are absent in
a) Male ticks
b) Male and female ticks of *Boophilus* sp.
c) Male ticks of *Haemaphysalis*
d) Male ticks of *Hyalomma* sp.

389. Queensland itch in horses is caused by the bite of
a) *Musca sp.*
b) *Culicoides sp.*
c) *Simulium sp.*
d) *Phlebotomus sp.*

390. Selamectin is a
a) Amidine
b) Macrocyclic lactone
c) Pyrethroid
d) Organophosphorus

391. Sensilum is an organ seen in
a) Tabanid flies
b) Mosquitoes
c) Fleas
d) Lice

392. Ornate longirostrate tick is
a) *Boophilus sp.*
b) *Hyalomma sp.*
c) *Amblyomma sp.*
d) *Haemaphysalis sp.*

393. GAVAC is a vaccine against
a) *Boophilus sp.*
b) *Ctenocephalides sp.*
c) *Rhipicephalus sp.*
d) *Haemaphysalis sp*

394. Spongy sensory structures in ticks which help in questing behaviour is
a) Hallers organ
b) Pygidium
c) Pulvillus
d) Caruncle

395. Mousy odour is characteristic in
a) Demodicosis
b) Tick toxicosis
c) Scaly leg
d) Depluming itch

396. Ear mite of cattle is
a) *Ornithonyssus bursa* b) *Otodectes cyanotis*
c) *Otobius megnini* d) *Raillietia auris*

397. Holocyclotoxin is a
a) Neurotoxin b) Haemotoxin
c) Endotoxin d) Hepatotoxin

398. Octopod nymph and hexapod larvae are seen in
a) Mites b) Ticks
c) Bugs d) Fleas

399. Human bed bugs are
a) Oviparous b) Larviparous
c) Ovoviviparous d) Pupiparous

400. Buggy odour in Cimex sp. is due to
a) Thoracic stink glands b) Salivary glands
c) Sebaceous glands d) Abdominal glands

401. Canine babesiosis is transmitted by ticks of genus
a) *Boophilus sp.* b) *Hyalomma sp.*
c) *Dermacentor sp.* d) *Rhipicephalus sp.*

402. A trypanosome that does not require an arthropod vector for transmission is
a) *T.theileri* b) *T evansi*
c) *T equiperdum* d) *T cruzi*

403. *Babesia equi* is now called as
a) *Babesia caballi* b) *Theilera equi*
c) *Ehrlichia equi* d) *Anaplasma equi*

404. *Leukocytozoon smithi* is transmitted by
a) Aedes sp b) Simulium sp
c) Culicoides sp d) Culex sp

405. The stage of development of *Leishmania* in vertebrate host is
a) Promastigote b) Epimastigote
c) Amastigote d) Trypomastigote

406. Sterile immunity is shown against
a) *Theileria parva* b) *Trypanosoma evansi*
c) *Trichomonas gallinae* d) *Toxoplasma gondii*

407. Tissue cyst forming coccidial organism in the following group is
a) *Eimeria* b) *Giardia*
c) *Isospora* d) *Toxoplasma*

408. Protozoan parasite which multiplies within the macrophage is
a) *Plasmodium* b) *Trypanosoma*
c) *Babesia* d) *Leishmania*

409. Vectors for *Haemoproteus* sp are
a) Hippoboscid flies b) *Haematopota*
c) *Haemaphysalis* d) *Hypoderma*

410. *Eimeria* sp. undergoing schizogony within nucleus of epithelial cell is
a) *E.tenella* b) *E.bovis*
c) *E.alabamensis* d) *E.brunetti*

411. A trypanosome that is cyclically transmitted by Tabanus fly is
a) *T. evansi* b) *T. gambiense*
c) *T. theileri* d) *T. cruzi*

412. Metacryptozoites of *Plasmodium* sp are
a) Sporozoites b) Schizonts
c) Merozoites d) Gamonts

413. Koch blue bodies are recognizable in
a) Red water fever b) Oriental theileriosis
c) Bovine tropical theileriosis d) Surra

414. Coccidia undergoing sporogony within vertebrate host is
a) *Sarcocystis sp* b) *Isospora sp*
c) *Toxoplasma sp* d) *Eimeria sp.*

415. Sarcocystis sp seen in sheep is
a) *S. cruzi* b) *S. hirsuta*
c) *S. meischeriana* d) *S tenella*

416. Raksha Vac T contains
a) Schizonts of *Theileria* b) Sporozoites of *Theileria*
c) Schizonts of *Toxoplasma* d) Tachyzoites of *Toxoplasma*

417. First proof of transmission of a protozoan parasite by an arthropod was given by
a) Smith and Kilborne b) Griffith Evans
c) Nicolle and Manceux d) Tyzzer and Fabian

418. Mature cyst of *Entamoeba bovis* contains
a) 8 nuclei b) 4 nuclei
c) I nuclei d) 2 nuclei

419. Apical complex is present in
a) Trichomonads b) Trypanosomes
c) Leishmania sp d) Toxoplasma

420. Extraintestinal coccidian parasite of birds is
a) *Eimeria tenella* b) *E. truncata*
c) *E. meleagridis* d) *E. anatis*

421. Xenodiagnosis is employed for diagnosis of
a) *Trypanosoma cruzi* b) *Giardia canis*
c) Eimeria faurei d) *Balantidium coli*

422. Sulphur yellow coloured droppings are feature of
a) Coccidiosis b) Balantidiosis
c) Histomonosis d) Amoebosis

KEY ANSWERS

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
d	c	c	d	b	d	d	c	a	b	d	d	c	c	a
16	17	18	19	20	21	22	23	24	25	26	27	28	29	30
d	d	a	b	c	c	a	d	c	b	a	b	b	a	d
31	32	33	34	35	36	37	38	39	40	41	42	43	44	45
c	d	b	c	b	a	b	b	b	b	a	a	c	a	b
46	47	48	49	50	51	52	53	54	55	56	57	58	59	60
c	b	c	b	a	a	d	d	a	c	b	c	b	d	a
61	62	63	64	65	66	67	68	69	70	71	72	73	74	75
b	c	d	d	c	c	b	d	a	d	a	b	a	b	b
76	77	78	79	80	81	82	83	84	85	86	87	88	89	90
c	c	d	c	b	c	c	c	c	d	c	d	a	d	d
91	92	93	94	95	96	97	98	99	100	101	102	103	104	105
b	a	b	a	d	a	a	a	c	b	a	b	b	c	b
106	107	108	109	110	111	112	113	114	115	116	117	118	119	120
a	b	b	b	a	b	b	c	b	d	b	c	d	b	d
121	122	123	124	125	126	127	128	129	130	131	132	133	134	135
c	b	c	d	a	d	a	a	c	c	a	d	d	b	d
136	137	138	139	140	141	142	143	144	145	146	147	148	149	150
b	a	b	d	c	a	b	d	c	d	d	c	d	a	b
151	152	153	154	155	156	157	158	159	160	161	162	163	164	165
d	c	c	c	a	b	d	c	c	a	b	b	a	c	b
166	167	168	169	170	171	172	173	174	175	176	177	178	179	180
a	d	a	b	c	d	a	c	d	c	b	d	a	c	a
181	182	183	184	185	186	187	188	189	190	191	192	193	194	195
c	d	d	b	b	d	b	a	c	d	b	c	a	c	b
196	197	198	199	200	201	202	203	204	205	206	207	208	209	210
a	d	d	c	a	c	a	c	b	d	b	d	b	c	a
211	212	213	214	215	216	217	218	219	220	221	222	223	224	225
d	b	c	a	b	d	c	c	a	c	a	a	a	d	b

226	227	228	229	230	231	232	233	234	235	236	237	238	239	240
a	c	a	b	c	d	a	a	a	d	a	c	c	d	c
241	242	243	244	245	246	247	248	249	250	251	252	253	254	255
b	b	d	d	a	b	d	a	a	d	a	a	c	d	b
256	257	258	259	260	261	262	263	264	265	266	267	268	269	270
c	c	c	d	c	b	b	c	d	a	a	c	b	a	c
271	272	273	274	275	276	277	278	279	280	281	282	283	284	285
c	a	c	d	a	c	a	c	b	c	a	c	d	a	d
286	287	288	289	290	291	292	293	294	295	296	297	298	299	300
b	d	b	a	b	a	a	b	a	b	a	c	a	b	c
301	302	303	304	305	306	307	308	309	310	311	312	313	314	315
b	c	b	c	a	d	c	a	d	d	b	b	a	b	a
316	317	318	319	320	321	322	323	324	325	326	327	328	329	330
b	a	b	b	b	b	a	b	c	c	a	c	b	a	c
331	332	333	334	335	336	337	338	339	340	341	342	343	344	345
a	b	a	b	d	c	d	b	c	d	b	a	d	c	c
346	347	348	349	350	351	352	353	354	355	356	357	358	359	360
d	c	d	b	d	b	d	b	b	a	d	d	c	c	b
361	362	363	364	365	366	367	368	369	370	371	372	373	374	375
b	b	b	d	b	c	c	d	d	b	c	b	c	b	b
376	377	378	379	380	381	382	383	384	385	386	387	388	389	390
b	d	b	b	d	b	b	c	d	a	b	a	c	b	b
391	392	393	394	395	396	397	398	399	400	401	402	403	404	405
c	c	a	a	a	d	a	b	a	a	d	c	b	b	c
406	407	408	409	410	411	412	413	414	415	416	417	418	419	420
a	d	d	a	c	c	b	c	a	d	a	a	c	d	b
421	422													
a	c													

II. Fill up the blanks:

1. 'Delhi boil' is a disease caused by....., a flagellate protozoan.
2. Comparatively non-pathogenic ..... can be differentiated from the causatives agent of surra in cattle by the total size of the former.
3. Intestinal amoebiosis is often characterized by the presence of ..... ulcers.
4. A mild form of diarrhoea may be the only clinical manifestation in pigs affected with mild to moderate number of.....
5. Commonly a thick blood smear is prepared to diagnose infection with.....
6. Routine faecal examination with .....stain is helpful in the diagnosis of intestinal amoebiosis.
7. Life cycle of *Toxoplasma gondii* involves an .....phase and extra intestinal phase.
8. Haemoglobinuria in bovine .....is due to destruction of erythrocytes.
9. Lymphadenitis in theileriosis corresponds to the development of .....
10. Trophozoites recovered from dysenteric stool of a patient suffering from amoebiosis contain ingested .....
11. The body cavity of insect is known as.....
12. Licked beef is a condition caused by .....
13. ..... is an example of synthetic pyrethroids.

14. Apical cell in blow flies is.....
15. *Bacillus thuringiensis* is used in the control of.....
16. In Hemiptera, wings are reduced to hard oval pads known as.....
17. Sporogony is a ..... type of reproduction.
18. Life cycle of *Theileria annulata* involves ..... transmission.
19. The stage of *Leishmania donovoni* found in insect vector of.....
20. The flagellate causing early embryonic mortality is.....
21. Oocysts of *Eimeria tenella* are seen in droppings from ..... DPI.
22. Anemia in Trypanosomosis is due to haemodilution whereas in babesiosis, it is due to .....
23. Entero-hepatitis is transmitted through.....
24. ..... test is used for the diagnosis of bovine trichomonosis.
25. Stable flies possess a ..... like proboscis.
26. Rostrum of hard ticks consist of mouth parts and.....
27. Gastro intestinal myiasis in horses is caused by the larvae of.....
28. Eye worm infection in cattle is transmitted by.....
29. *Trichodectes canis* is incriminated as one of the agents responsible for the transmission of .....
30. Mosquitoes of the genus ..... lay single eggs with floats.
31. Black flies lay their eggs in.....
32. The most characteristic clinical feature of bovine babesiosis is the.....
33. Characteristic punched out ulcers in the abomasal wall of calves occur in .....
34. Trypanosomes hoodwink the immune system of their host by ..... of their surface.
35. The early trophozoite stage of malarial parasite is better known as ..... stage.
36. Parasites of the genus ..... possess sporulated oocysts containing four sporocysts, each with two sporozoites.
37. Salivarian trypanosomes have an ..... station development.
38. Sulphur yellow coloured droppings are characteristic of .....infection in turkeys.
39. ..... is a one host tick.
40. Red mange in dogs is caused by.....
41. Both male and female fly suck blood.
42. Arista bilaterally plumed up to the middle and bare beyond is characteristic of.....
43. Casting off the exoskeleton is referred to as.....
44. Compound eyes placed close together is referred to as.....
45. Larvae of mosquitoes are commonly called .....
46. ..... is involved in the transmission of *Dipylidium caninum*.
47. Methoprene is a ..... for mosquitoes.
48. ..... is called the occult trypanosome.
49. Amastigote stages of *Leishmania donovani* are also called as.....
50. Coffee coloured urine in cattle is associated with ..... protozoal infection.
51. ..... is the vaccine against *Theileria annulata.*
52. ..... was first described by Griffth Evans in 1880.
53. Sporulated oocyst of *Eimeria* species have ..... sporocysts with .....sporozoites.
54. Organ of locomotion for *Balantidium coli* is.....
55. Tail switch louse of cattle is.....
56. Sheep nasal fly is.....
57. The mite responsible for sheep scab condition is.....
58 .....of ticks transmit *Theileria annulata* in cattle.
59. In the order Diptera, the metathoracic wings are reduced into.....
60. The ventral plates are absent in male and female of ..... species of ixodid tick.

61. Ox warble is the larvae of ..... fly.
62. In insects, simple eyes are termed as .....
63. State of protective immunity to superinfection conferred by presence of residual parasite is termed.....
64. An agent that transmits a disease organism is a.....
65. ..... derived a system of binomial nomenclature.
66. ..... period is the interval between infection of a host and onset of symptoms.
67. A disease or infection that is a constant feature of an area is termed .....
68. Organism which is parasitic in its larval/juvenile stage and is free living as adult is a ..... parasite.
69. ..... is the father of Parasitology.
70. ..... parasites have a very narrow host spectrum.
71. ..... is diagnosis of disease by infecting a test animal.
72. Saturated salt solution is used in examination of faeces by ..... method.
73. Secretions of the ..... gland form shell of the eggs in trematodes.
74. Unit of the excretory system in platyhelminths is ..... cells.
75. ..... is the infective stage to definitive host in case of amphistomes while it is cercaria for schistosomes.
76. ..... are the two intermediate hosts of *Diphyllobothrium latum*.
77. Club shaped oesophagus without posterior bulb is called.....
78. Egg of *Spirocerca lupi* is ..... shaped.
79. Slime balls consist of clumps of.....
80. *Histomonas meleagridis* is associated with ..... nematode.
81. Tongue worms are included in the phylum.....
82 Chemicals which kill flies and fleas are called insecticides, but when used against ..... they are termed acaricides.
83. A ..... parasite is one which does not have any free or non-parasitic existence.
84. Skin scrapings are processed by boiling with .....
85. Migration of larval stage of a parasite through various tissues or organs in the definitive host during its development constitute ..... phase.
86. The sequential changes through different distinct stages which occur in the life cycle of arthropods is known as .....
87. The process by which progeny are produced without fertilization is called as .....
88. An organism which transfer the infective agent without any development in it is called as .....
89. The period between ingestion of the parasite and manifestation of clinical signs is called as .....
90. In the life cycle of protozoa syngamy is followed by .....
91. The intestinal caeca of the 'Giant intestinal fluke of man' is ..... in nature and hence it differ from that of the large liver fluke of cattle.
92. The migration of larvae of .....result in 'visceral larva migrans' in children.
93. Piperazine salts are the drug of choice against ..... worms.
94. The male of the equine pin worm is characterized by a ..... shaped spicule.
95. Nymphs of dragon flies act as second intermediate hosts for ..... fluke.
96. Man act as both definitive host and intermediate host for .....
97. Face fly acts as intermediate host for the nematode causing .....in cattle.
98. Euryxenous parasites are those having ..... hosts.
99. Reinfection without exposure to environment is called.....

100. An organism which does not have the capacity to live on its own during its entire life time is designated ..... parasite.
101. A parasitic organism with both male and female reproductive systems within its body is a .....
102. Naming of animal parasites should be done in accordance with the .....
103. Romanowsky stains for staining blood smears essentially contain a ..... part and a methylene blue part.
104. Schizogony is a type of ..... multiplication.
105. Baerman's technique is used to recover ..... type of larvae of nematodes.
106. A parasite which get lodged in an unusual site in the host is known as .....
107. Disintegration of gravid proglottid of a cestode is called.....
108. In the life cycle of schistosomes ..... stage is absent and later the cercariae do not encyst.
109. "Husk" or "Hoose" is caused by ..... in sheep.
110. The infective stage in ascarids is.....
111. "Slime balls" are masses of ..... associated with the life cycle of certain flukes.
112. "Hump sore" in cattle is caused by.....
113. The ascarid worm of cattle gets transmitted through ..... route to the young calves.
114. The presence of a genital sucker in ..... is an important morphological character.
115. Milky or white spotted liver in piglets is due to ..... infection.
116. Ox warble is the larvae of ..... fly.
117. The intermediate stages of tapeworms are referred to as.....
118. Trichuris eggs are ..... shaped with plug at both ends.
119. The brood capsules which float free in the cyst fluid are known as.....
120. Slime balls are associated with .....
121. Taenia eggs have ..... shell with radial striations and hexacanth embryo.
122. In Strongyle sp. of nematodes, the modified caudal papillae are called as .....
123. ..... eggs are palanquin shaped.
124. Increased activity period of parasites during dawn and dusk in a day is called as.....
125. Asexual reproduction with multiple fission is known as.....
126. The larval stages of the cestodes are commonly referred to as .....
127. A host harbouring the residual parasite in a latent phase without showing clinical signs .....
128. ..... are the two metacestode stages seen in *Mesocestoides lineatus*.
129. ..... are the common modes of parasitic infections.
130. The nodular Taeniasis is caused by .....
131. The common mode of infection of the definitive hosts is by .....in Ancylostomes infection, by ..... in Ascarid infection and by .....in filarid nematode infection.
132. The various larval stages of trematodes are.....
133. ..... act as common intermediate host for poultry helminths.
134. The presence of residual parasite in the body like in the case of Babesiosis renders the host some degree of protection by way of.....

135. For the detection of eggs of nematode parasites in the dung ..... is the most suitable technique.
136. In the protozoan life cycle syngamy is always preceded by .....
137. Scientific name of a parasite consists of a ..... part and a specific part.
138. The larger organism which harbour the sexually mature stage of a parasite is known as .....
139. An insect which transmits the stages of parasite from one vertebrate host to another is called a.....
140. The term ..... denotes a change taking place in a host wherein one type of tissue transforms to another as an effect of parasitism without the involvement of embryonic tissue.
141. Ticks and mites fall under the order .....
142. The class ..... comprises of thorny-headed worms.
143. 'Cutaneous larva migrans' in human beings is caused by migrating larvae of ..... worms.
144. Life cycle of Fasciola sp. is characterized by the presence of daughter ..... stage.
145. Larval form of poultry tape worms are ..... which occur in arthropod intermediate hosts.
146. Eggs of the ascarid worm of cattle are ..... in shape.
147. Fluke eggs are ..... eggs.
148. The eye worm of cattle has a ..... life cycle.
149. Nodular taeniasis in poultry is caused by .....
150. 'Pouched amphistomes' like Gastrothylax sp. possess a ..... pouch.
151. A short antenna with an arista is known as.....
152. 'Warbles' on the back of cattle are cused by larvae of.....
153. Mouth parts of ..... is retractable and hence visible only when the fly feeds.
154. Transtadial transmission of parasites is a common feature in the life cycle of.....
155. Trophozoites recovered from dysenteric stool of a patient suffering from amoebiosis contain ingested.....
156. A ..... examination is done to quickly detect the presence of trypanosomes in blood.
157. In cases of death due to theileriosis in cattle the abomasums reveal the presence of ..... ulcers.
158. In the case of trypanosomes ..... is the most advanced morphological stage.
159. In bovine Babesiasis ..... is the most characteristic clinical feature.
160. Bovine anaplasmosis can be transmitted by ticks and .....
161. In the life cycle of protozoan parasites gametogony is followed by .....
162. A ..... antenna is a short one with an arista.
163. Stable flies possess a ..... like proboscis.
164. Enteric myiasis in horses is produced by the larvae of .....
165. Eye worm infection in cattle is transmitted by.....
166. Trichodectes canis is a louse infecting dogs which is incriminated as responsible for the transmission of .....
167. A pupa is known as ..... when it is not possible to see the appendages of the developing fly within it.
168. Mosquitoes of the genus ..... lays single eggs without floats.

169. Parasites of the genus ..... possess sporulated oocysts containing four sporocysts, each with two sporozoites.
170. Upper respiratory tract of pigeon harbours .....
171. Sabin-Feldman dye test is used in the diagnosis of ..... infection.
172. Characteristic puched out ulcers in the abomasal wall of calves occur in .....
173. Intermediate host for *Sarcocystis cruzi* is .....
174. Malarial parasite has an early trophozoite stage, better known as ..... stage.
175. Sand flies upon biting the host introduce ..... stage of leishmanial parasites.
176. Haemoglobinuria is the most characteristic clinical feature of ..... in cattle.
177. Tropical canine pancytopenia is a condition caused by .....
178. Trypanosomes avoid the immune system of their host by ..... of their surface coat.
179. The immunity to superinfection due to presence of residual parasite is called as.....
180. An offspring that acquires infection from its mother through placental membrane is called as .....
181. The absorption of nutrients through the body wall is .....
182. A parasite which parasitizes an organ, which is not its actual habitat is .....
183. Changes in the form of an insect during its development is called as .....
184. ..... is an asexual reproduction in which multiple division of nucleus followed by cytoplasm occurs.
185. Prolonged and frequent use of same group of anthelmintics will lead to .....
186. The larval stage of filarid nematode is called as .....
187. In chicken, laying of leathery egg is caused by .....
188. The drug of choice for acute fasciolosis in sheep is .....
189. The second intermediate host for *Paragonimus* spp is .....
190. Mesentric aneurysm in horses is caused by .....
191. Warbles in cattle are due to .....
192. Lifecycle of mosquitoes is generally completed in ..... days.
193. Mules' operation is performed to control .....
194. Tracheal system in insects opens to the exterior through .....
195. ..... is the drug of choice of *Demodex canis*.
196. Butox contains ..... compound.
197. Tiger mosquito is .....
198. Powerful claws on legs are a feature of the family .....
199. Larvae of blowflies are called as .....
200. ..... is the brown dog tick.
201. Bilaterally plumose arista till the tip is seen in .....
202. A host which harbours asexual or larval stage of parasite is called as .....
203. Absorption of nutrients through body surface is called as .....
204. Reproduction by larval stage of ;parasite is called as .....
205. Transmission of parasite from mother to offspring through placental circulation is called as .....
206. Parasite name should be ..... while printing.
207. Indiscriminate use of anthelmintic will result in development of .....
208. Severity of helminthic infection could be determined by .....
209. The egg of ..... is palanquin shaped.

210. Metacestode of *Taenia solium* is called as .....
211. The larvae of filarid nematode is known as .....
212. Self cure is associated with .....
213. The larval stage of cestodes is called as .....
214. Anal pruritus in dog is caused by .....
215. In hookworms, the mode of infection of definitive host is by .....
216. Organism completely adapted to parasitic lifecycles and which cannot survive without a host is called ..... parasite.
217. Fusion of male and female gametes to produce a zygote is termed .....
218. The interval between infection of a host with an organism and onset of symptoms is ..... period.
219. ..... is the state of protective immunity to super infection due to the presence of residual parasite in host.
220. ..... code is followed while naming an organism belonging to the animal kingdom.
221. Trematodes are fixed using .....
222. ..... saturated solution is commonly used for floatation technique.
223. .....are the first and second bladder worm stages of *Mesocestoides lineatus.*
224. *Heterakis gallinae* is involved in transmission of a ..... protozoan parasite.
225. Crossing over of the uterus is seen in ..... amphistome.
226. *Stephanofilaria assamensis* is associated with chronic dermatitis termed .....
227. Head bulb of *Gnathosoma spinogerum* have head bulbs with cavities termed .....
228. Neurocysticercosis is caused by ..... which is the larval stage of Taenia solium tapeworm.
229. Non parasitic nematodes show ..... oesophagus while parasitic and second stage larval stage have ..... oesophagus.
230. A compound antenna possess a branch named ..... on its distal segment.
231. Black flies lay their eggs in .....
232. ..... is responsible for the transmission of dog tapeworm to the final host.
233. Mouth parts of the common house fly is adapted for .....
234. Lice are permanent ectoparasites with ..... metamorphosis in their life cycle.
235. Boophilid ticks can be recognized by their ..... shaped basis capitulum.
236. Babesia equi is so small in size when compared to the other equine babesial organism that it has of late been renamed as .....
237. Salivarian trypanosomes have an ..... station development.
238. Sulphur yellow coloured droppings are characteristic of ..... infection in turkeys.
239. The most important coccidial species causing the disease in poultry is .....
240. The trypanosome causing ..... in equines is transmitted by coitus.

KEY ANSWERS

1	**Leishmania**	2	***Trypanosoma theileri***
3	**Flask**	4	***E. coli***

5	Blood parasites	6	Iodine
7	Intestinal	8	Babesiosis
9	Schizonts	10	Cysts
11	Haemocoele	12	*Hypoderma bovis*
13	Deltamethrin	14	Closed
15	Mosquitoes	16	Hemelytra
17	Sexual	18	Tick
19	Promastigote	20	Trichomonas
21	7^{th}	22	Haemoglobinuria
23	*H. gallinarum*	24	Agglutination
25	Baton	26	Pedipalps
27	Gasterophilus	28	*Musca domestica*
29	*Dipylidium canium*	30	Anopheles
31	Running stream of water	32	Haemoglobinuria
33	Bovine Theileriosis.	34	Variation
35	Signet Rig	36	Eimeria
37	Anterior	38	Black Head
39	Boophilus	40	*Demodex canis*
41	Simulium	42	Sarcophaga
43	Molting/Ecdysis	44	Holoptic
45	Wrigglers	46	Dog fleas
47	Synthetic JH larvicide	48	*T. theileri*
49	LD bodies	50	Babesia
51	Rakshavac.T	52	*T. evansi*
53	4; 2	54	Cilia
55	*Haematopinus eurysternus*	56	*Oestrus ovis*
57	Psoroptes	58	Hyalomma sp
59	Halters	60	Haemaphysalis
61	Hypoderma	62	Ocelli.
63	Premunity	64	Vector
65	Carl Van Linnaeus	66	Incubation
67	Endemic	68	Protelean
69	Francis Co Redi	70	Stenoxenous
71	Inoculation	72	Floatation
73	Mehli's	74	Flame
75	Metacercaria	76	Cyclops and fish
77	Filariform	78	Gelatin capsule
79	Cercariae	80	*Heterakis gallinae*
81	Arthropoda	82	Arachnids
83	Permanent	84	Potassium hydroxide
85	Histotropic	86	Metamorphosis
87	Parthenogenesis	88	Mechanical vector
89	Incubation period	90	Sporogony
91	Simple	92	*T. canis*
93	Ascarid	94	Pin
95	Oviduct	96	*Taenia solium*
97	Thelazia	98	Many
99	Auto infection	100	Permanent

101	Hermaphodite	102	International Code of Zoological Nomen clature
103	Eosin	104	Asexual
105	Non-migratory	106	Aberrant
107	Apolysis	108	Radial
109	*Dictyocaulus filaria*	110	Egg with L_2 larva
111	Cercaria	112	*Stephanofilaria assamensis*
113	Trans-mammary	114	Cotylophoron
115	*Ascaris suum*	116	Hypoderma
117	Bladder worms	118	Barrel
119	Hydatid sand	120	Cercariae of Dicrocelium
121	Thick	122	Bursal rays
123	*S. spindalis*	124	Diurnal
125	Schizogony	126	Bladder worms
127	Reservoir host	128	Cysticercoid and tetrathyridium
129	Oral and skin penetration	130	*Railletina echinobothrida*
131	Skin penetration; Prenatal; Mosquito bite	132	Miracidium, Sporocyst, Redia and Cercaria
133	Earthworms	134	Premunity
135	Floatation	136	Gametogony
137	Generic	138	Definitive host
139	Vector	140	Metaplasia
141	Acarina	142	Acanthocephala
143	Ancylostome	144	Redia
145	Cysticercoid	146	Globular
147	Composite	148	Indirect
149	*Raillietina echinobothrida*	150	Ventral
151	Compound/antenna	152	*Hypoderma bovis*
153	House fly	154	Babesia
155	RBC	156	Wet film
157	Punched out	158	Trypomastigote
159	Hemoglobinuria	160	Mechanically by biting
161	Sporogony	162	Compound
163	Baton	164	Gasterophilus
165	Musca	166	Dipylidium
167	Coarctate	168	Aedes
169	Eimeria	170	*Trichomonas gallinae*
171	Toxoplasma	172	Theileriasis
173	Ruminants	174	Signet ring
175	Promastigote	176	Babesiosis
177	Ehrlichia	178	Variation
179	Premunity	180	Prenatal
181	Assimilation	182	Aberrant parasite
183	Metamorphosis	184	Schizogony
185	Anthelmintic resistance	186	Microfilaria
187	*Davainea proglottina*	188	Oxyclozanide
189	Crabs	190	*Strongylus vulgaris*
191	larvae of *Hypoderma lineatum*	192	Seven

193	**Blow fly myiasis**	194	**Spiracles**
195	**Amitraz**	196	**Deltamethrin**
197	***Aedes aegypti***	198	**Hippoboscidae**
199	**Maggots**	200	***Rhipicephalus sanguineus***
201	***Musca domestica***	202	**Intermediate host**
203	**Saprozoic**	204	**Paedogenesis**
205	**Congenital infection**	206	**Italicize**
207	**Anthelmintic resistance**	208	**EPG/Mc Master technique**
209	***Schistosoma nasale***	210	***Cysticercus cellulosae***
211	**Microfilaria**	212	***Haemonchus contortus***
213	**Metacestode**	214	***Dipylidium caninum***
215	**Skin penetration**	216	**Obligatory**
217	**Syngamy**	218	**Incubation**
219	**Premunity**	220	**10% formalin**
221	**Sodium Chloride**	222	**Cysticercoid and tetrathyridium**
223	***Histomonas meleagridis***	224	***Gastrothylax crumenifer***
225	**Hump sore**	226	**Balonets**
227	***Cysticercus cellulosae***	228	**Rhabditiform**
229	**Filariform**	230	**Arista**
231	**Submerged rocks or vegetation**	232	***Ctenocephalides* canis**
233	**Sponging/licking.**	234	**Incomplete**
235	**Crescent/curved/half-moon**	236	***Theileria equi***
237	**Anterior**	238	***Histomonas meleagridis***
239	***Eimeria tenella***	240	**Dourine**

III. State whether the following area TRUE or FALSE:

1. Horse flies are capable of biologically transmitting the larger and non-pathogenic *Trypanosoma theileri* to cattle.
2. It is possible to carry out immunoprophylaxis in cattle against cattle ticks.
3. Cigar mites causing demodecosis in various domestic animals are highly host-specific.
4. Ivermectin is an injectable acaricide with very low level of toxicity.
5. Psoroptic mange is a condition caused by superficially dwelling mites.
6. Maggots of *Chrysomyia sp.* are secondary invaders of a wound.
7. The pathogenesis in *Eimeria tenella* is due to large number of oocysts produce from the caecum.
8. The stage of *Hepatozoon canis* in the leucocytes is gamonts.
9. The first pathogenic protozoon identified was *Entamoeba histolytica.*
10. PKDL is sequelae of improper treatment of cutaneous leishmaniasis.
11. Giardiosis results in deficiency of fat soluble vitamins.
12. LD bodies are seen in the cells of mononuclear phagocytic system.
13. The vegetative stage of protozoa is trophozoites.
14. Micronuclei are seen in intra cellular protozoan parasites.
15. Ionophorous antibiotic compound used in the treatment of coccidiosis is Salinomycin.
16. Stilbamidine test is useful in specific diagnosis of trypanosomosis.
17. Rakshavac-T is an indigenous vaccine for theileriosis.
18. Amoebiosis is an anthropozoonotic disease.
19. Coccivac is a commercial vaccine available in the market for effective control of bovine coccidiosis.

20. *Eimeria tenella* is a serious pathogenic protozoan of the caecum of poultry which get transmitted by the caecal worm.
21. Female *Anopheles* mosquitoes are the final hosts for the malarial parasites of man.
22. *Anaplasma* is a sporozoan haemoparasite of dog which get transmitted by tabanid flies.
23. It is not easy to diagnose toxoplasmosis in man and animals with routine faecal examination.
24. *Trypanosoma evansi* is capable of infecting elephants.
25. Flagellate protozoans like *Eimeria* sp. live in the intestinal villi of carnivores and produce haemorrhagic enteritis.
26. Ticks of the genus *Boophilus* are responsible for the transmission of canine babesiosis caused by *Babesia canis*.
27. Budding is the type of asexual reproduction encountered in *Theileria* sp.
28. Indian Kala-azar is a zoonotic disease for which dog act as a reservoir host.
29. 'Dourine' is caused by *Trypanosoma theileri.*
30. Fleas have laterally compressed bodies.
31. Wings of deer fly have a dark band across the wing.
32. Aristae are absent in the sub order Nematocera.
33. Human malaria is transmitted by Culex sp of mosquitoes.
34. *Rhipicephalus sanguineus* is a longirostrate tick.
35. Antennae are plumose in male mosquitoes.
36. *Tabanus striatus* transmits Kala azar in India.
37. House flies transmit amoebosis mechanically.
38. *Linguatula serrata* is commonly called as heel fly.
39. Lice lay eggs in the hair of the host.
40. Flagella arise from blepharoplast.
41. Multiple infection of erythrocyte is common in *Babesia canis* infection.
42. *Hepatozoon canis* is transmitted through the bite of *Rhipicephalus sanguineus* ticks.
43. Protozoa are unicellular organisms.
44. Oocyst of coccidian can be floated by using saturated salt solution.
45. Amoebae move by cilia.
46. Dye test is used in the diagnosis of canine ehrlichiosis.
47. Most of the native cattle harbour *Theileria annulata.*
48. Premunition is seen in *Babesia bigemina* infection.
49. *Eimeria tenella* causes disease in layers.
50. Parthenogenesis is reproduction in which progeny is produced without fertilization.
51. Reproduction by larval or young forms is Paedogenesis.
52. Immunity without residual parasite is concommittent immunity.
53. Organism which parasitizes another parasite is a pathogenic parasite.
54. *Schistosoma nasale* lifecycle was worked out by M.Anant Narayan Rao.
55. Bothria is the hold fast organ in case of Eucestoda.
56. Hepatotracheal route of migration is common amongst the Strongyles.
57. Pitto is the term associated with immature amphistomosis.
58. Water caltrop with metacercariae is the source of infection for *Fasciolopsis buski.*
59. Portion of the Cestode egg with the hexacanth embryo is the onchosphere.
60. Strongyle worms show sexual dimorphism with the females displaying copulatory bursa.
61. Excretory organs of trematodes and cestodes are flame cells.
62. 'White spots' in liver is characteristic of toxocarosis in puppies.
63. Males of blood flukes are elongate, cylindrical and provided with copulatory spicules.

64. Deworming alone cannot effect a control of dipylidiosis in dogs.
65. Eye worm of cattle has a direct life cycle.
66. Oviduct fluke affects the oviduct and bursa of fowl.
67. *Raillietina echinobothrida* is the smallest cestode affecting poultry which produces nodular taeniasis.
68. Egg of *Spirocerca lupi* is the smallest nematode egg that one encounter in the faeces of dog.
69. *Paragonimus westermanii* inhabits the trachea of sheep.
70. *Hymenolepis carioca* infects man.
71. Toxocarosis in calves is a self-limiting disease.
72. *Raillietina tetragona* is a common endoparasitic tapeworm of dogs.
73. Piperazine compounds are effective against adult *Toxocara vitulorum.*
74. Storing drinking water for 24 hours or more can help in preventing infection with animal schistosomes.
75. *Heterakis gallinarum* infects the caecum of horse.
76. Cysticercoid is a parasite inhabiting the liver of final host.
77. *Toxascaris leonina* is a parasite of cats.
78. Alimentary system of a digenetic trematode has blind intestinal caeca.
79. Anal pruritus is a condition in horses caused by *Parascaris equorum.*
80. The eggs of *Schistosoma nasale* are elliptical in shape.
81. Praziquantel is a very effective drug to treat cestode infections.
82. Ivermectin is useful as an anti-nematodal drug whereas it is not effective against cestodes and trematodes.
83. Bottle jaw syndrome is observed in many helminthic infections.
84. Dipylidiosis in dogs can be effectively controlled only with associated ectoparasitic control.
85. *Cysticercus tenuicollis* is not considered to be a major pathogenic entity.
86. Consumption of meat with hydatid cyst usually do not result in the disease entity in human beings.
87. Toxocarosis in calves is a self limiting disease.
88. Visceral larva migrans is primarily a disease of children.
89. Immature amphistomosis is difficult to be diagnosed by faecal examination.
90. Saturated sodium chloride solution is ideal for floating trematode eggs.
91. Peripheral blood should be examined for detection of blood parasites.
92. In symbiosis there is no mutual benefit to both the organism.
93. Name of the family will end with the letter "oidea".
94. Potassium cyanide and ether are insect killing chemicals.
95. The base portion of the blood smear must be examined to detect blood parasites.
96. *Heterakis gallinarum* is the etiological agent of enterohepatitis in turkeys.
97. 'Slime balls' are masses of eggs associated with the life cycle of pseudophyllidean tapeworms.
98. *Paragonimus westermani* do not have a redia stage in its life cycle.
99. The gravid segments of a cestode release the eggs through the genital pore.
100. 'Milk spot liver' is characteristic of chronic fasciolosis in goats.
101. Land snails act as first intermediate hosts for Anoplocephaline tapeworms.
102. Miracidium is the larval stage of pork tapeworm.
103. Piperazine salts are the drugs of choice for treatment of cestode infections.
104. The eggs of *Schistosoma nasale* are elliptical in shape.
105. *Moniezia expansa* is a fluke parasite of dog.
106. *Toxoplasma gondii* can infect all mammals.

107. *Trypanosoma evansi* infects elephants.
108. Apolysis is seen in nematodes.
109. Female Anopheles mosquitoes are the intermediate hosts for malarial parasites of man.
110. Indian Kala-azar is a zoonotic disease with dog acting as a reservoir host.
111. Red water disease or bovine tropical theileriosis which occur in India is caused by *Theileria parva.*
112. Intestinal amoebiosis is often characterized by the presence of flask-shaped ulcers.
113. Budding is the type of asexual reproduction encountered in *Theileria* sp.
114. Ticks of *Boophilus* sp. are responsible for the transmission of canine babesiosis caused by *Babesia canis.*
115. Young animals are more susceptible to parasitic infections.
116. In paratenic host, parasite undergoes some developmental changes.
117. Protozoa are unicellular animals.
118. Nematodes are unisexual.
119. Name of the order will end with the letters "inae".
120. Acaricides are used for control of ticks.
121. Vertebrate animals (mammals) will never act as intermediate host for any parasites.
122. Helminthic infections could be controlled by judicial use of anthelmintics coupled with improved managemental practices.
123. Prepatent period is the time interval between ingestion of the parasite and onset of clinical signs.
124. Acquired immunity is developed by the host after birth either due to vaccination or natural exposure.
125. All trematodes are hermaphrodite.
126. Amoebotaenia and Syngamus spp are commonly encountering helminthic parasites in desi fowls of Kerala.
127. Visceral larval migrans is a condition occur in natural host of the parasites.
128. *Dipylidium caninum* infection in dogs occurs by biting of infected flea.
129. The larvae of hook worms enter into the host by active skin penetration.
130. Both male and female *Stomoxys calcitrans* suck blood.
131. Nematocerans possess a single segmented antenna)
132. *Melophagus ovinus* is a wingless fly.
133. *Psoroptes ovis* is a burrowing type of mite.
134. Chikungunya in man is transmitted by Anopheles mosquito.
135. Methoprene is an organophosphorous insecticide.
136. *Toxoplama gondii* can infect all mammals.
137. Budding is the type of asexual reproduction in trypanosomes.
138. Coccivac is an indigenous commercial vaccine for Coccidiosis.
139. Tropical bovine Theileriosis in India is caused by *Theileria parva.*
140. *Echriichia canis* always causes a disease of sub clinical nature.
141. The stage of trypanosome seen in blood smear is amastigote.
142. *Sarcocystis cruzi* is a facultative heteroxenous parasite.
143. The cysts of Giardia have four nuclei.
144. Malignant jaundice is caused by anaplasmosis.
145. Sand flies inoculate amastigote stage into man.
146. All trypanosomes are mechanically transmitted by tabanid flies.
147. Enterohepatitis is caused by *Eimeria tenella.*
148. Mosquitoes can be effectively controlled by the use of 'sterile male technique'.
149. Lice infestation in cattle and dogs sometimes indicate a poor plane of nutrition.

150. Fleas possess very powerful metathoracic wings which enable them to jump and quickly fly off.
151. Bed bugs are quite hardy in nature and can thrive upto two years without a meal.
152. Tabanids lay their eggs in moist vertical walls.
153. Forest flies lack powerful legs and hence resort to interrupted feeding technique for a satisfying blood meal.
154. Invariably all digenetic trematode utilize snail as first intermediate host.
155. Incubation period is time interval between entry of parasite and onset of clinical signs.
156. Adult animals are more susceptible to parasitic infection than young one.
157. Eucestodan tapeworms lay eggs, which hatch in the environment.
158. In nematodes third stage larvae is infective except in ascarids.
159. Alternation of asexual and sexual reproduction occur in coccidian parasite.
160. Dictol is a vaccine developed for *Dirofilaria immitis*.
161. Stoll's technique is used for collecting of hook worm larvae.
162. Different structures of protozoa are called as organelles.
163. Insects usually pass through different stages during their development.
164. All trematodes are hermaphrodite.
165. *Indoplanorbis* spp. of snail is the intermediate host for *Fasciola* spp.
166. Ivermectin is very effective drug for trematode infections in sheep.
167. Ourbreak of immature amphistomosis occurs in summer.
168. Summer sore is caused by *Parafilaria bovicola.*
169. Fish acts as the second intermediate host for *Dipyllobothrium latum.*
170. Adult worm of *Toxocara vitulorum* found only in adult animals.
171. Neurocysticercosis occurs in man when he acts as intermediate host for *Taenia solium.*
172. Cystacanth is the larval stage of poultry tapeworm.

KEY ANSWERS

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
F	T	T	T	T	T	T	T	F	T	T	F	T	F	T
16	17	18	19	20	21	22	23	24	25	26	27	28	29	30
T	T	F	F	F	F	F	T	T	F	F	F	T	F	T
31	32	33	34	35	36	37	38	39	40	41	42	43	44	45
T	T	F	F	T	F	T	F	T	T	T	F	T	T	F
46	47	48	49	50	51	52	53	54	55	56	57	58	59	60
F	T	T	T	T	T	F	F	T	F	F	T	T	T	F
61	62	63	64	65	66	67	68	69	70	71	72	73	74	75
T	F	F	T	F	T	F	T	F	F	T	F	T	T	F
76	77	78	79	80	81	82	83	84	85	86	87	88	89	90
F	T	T	F	F	T	T	T	T	T	F	T	T	T	F
91	92	93	94	95	96	97	98	99	100	101	102	103	104	105
T	F	F	T	F	F	F	F	F	F	F	F	F	F	F
106	107	108	109	110	111	112	113	114	115	116	117	118	119	120
T	T	T	T	F	F	T	F	F	T	F	T	T	F	T

121	122	123	124	125	126	127	128	129	130	131	132	133	134	135
F	T	T	T	T	T	F	F	T	T	F	T	F	F	F
136	137	138	139	140	141	142	143	144	145	146	147	148	149	150
T	F	F	F	F	F	F	F	F	F	F	F	F	T	F
151	152	153	154	155	156	157	158	159	160	161	162	163	164	165
T	T	F	T	T	F	F	T	T	F	F	T	T	T	F
166	167	168	169	170	171	172								
F	T	F	T	F	T	F								

IV. Match the following:

I

1. Autoheteroxenous
2. Cyclical vectors
3. Protelean parasite
4. Composite egg
5. Schizogony
6. Polyxenous
7. Lactophenol
8. Harada More technique
9. Mc Master technique
10. Knotts technique

a) *Tabanus sp*
b) Merozoites
c) *Fasciola*
d) *Moniezia*
e) *Toxoplasma gondii*
f) Clearing agent
g) Faecal culture
h) *Trichinella spiralis*
i) Filarids
j) *Oestrus ovis*
k) Faecal egg count

Ans: 1. h 2. a 3. j 4. c 5. b
6. e 7. f 8. g 9. k 10. i

II

1. Carrier host
2. Garden Lizard
3. Microscope
4. Father of Taxonomy
5. Earthworm
6. Aestivation
7. Flame cells
8. Antigenic variation
9. Spicules
10. Antenna

a) Summer sleep
b) Carolus Linnaeus
c) Transport host
d) Trematode
e) Anton Van Leuwenhoek
f) Insects
g) Trypanosome
h) Paratenic host
i) Latent phase
j) Nematode

Ans: 1.i 2. h 3. e 4. b 5. c
6. a 7. d 8. g 9. j 10. f

III

1. *Heterakis gallinarum*	a) Anaemia
2. *Spirocerca lupi*	b) Anal pruritus
3. *Oxyuris equi*	c) Actinobody
4. *Haemonchus contortus*	d) *Histomonas meleagridis*
5. *Schistosome* spp.	e) Garden lizard
6. *Gigantocotyle explanatum*	f) Gid in sheep
7. Hypobiosis	g) Prenatal infection
8. *Toxocara canis*	h) *Scistosomes* spp.
9. *Coenurus cerebralis*	i) Arrested larval development
10. Furcocercus cercaria	j) Bile duct

Ans: 1. d 2. e 3. b 4. a 5. c
6. j 7. i 8. g 9. f 10. h

IV

1. Intestinal ulcers	a) Trichomonosis
2. Abortion	b) Ehrlichiosis
3. Abomasal ulcers	c) Babesiosis
4. Pancytopaenia	d) Amoebosis
5. Kalaazar	e) Toxoplasmosis
6. Haemogobinuria	f) Trypanosomosis
7. Sterility	g) Theileriosis
8. Anaemia	h) Leishmanosis

Ans: 1. d 2. e/a 3. g 4. b
5. h 6. c 7. a 8. f/g

V

a) Signet ring	1. Promastigote
b) Koch's blue body	2. Fast dividing
c) Sporulated oocyst	3. Biting midges
d) Tachyzoites	4. Antigenic variation
e) Flask shaped ulcers	5. Theileria
f) Ciliate	6. Plasmodium
g) Diminazine aceturate	7. Gut epithelium
h) Halter-shape	8. Babesiosis
i) Infective stage	9. Coccidia
j) Trypanosomes	10. Amoebiosis
	11. *Balantidium coli*
	12. Haemoproteus

Ans: a) 6 b) 5 c) 9 d) 2 e) 10
f) 11 g) 8 h) 12 i) 1 j) 4

VI

a) Stumpy legs
b) Mange
c) Flumethrin
d) Spiracles
e) Sensilium
f) Sucking louse

1. Linognathus
2. Flea
3. Damalinia
4. Vision
5. Demodex
6. Injection
7. 'Pour-on'
8. Disease
9. Breathing

Ans: a) 5 b) 8 c) 7 d) 9 e) 2 f) 1

VII

a) Methanol
b) Sabin-Feldman dye test
c) Chromatoid body
d) Trichomonas
e) Sporont
f) Leucocytozoon
g) Pancytopenia
h) Culex
i) Coccidiosis
j) Quinapyramine

1. Axostyle
2. Bangkok haemorrhagic disease
3. Age-resistance
4. Enrlichiosis
5. Bird malaria
6. Trypanosomes
7. Giardia
8. Stock Leishman's stain solution
9. Infective stage
10. Ciliate protozoa
11. Toxoplasmosis
12. Eimeria
13. Entamoeba

Ans: a) 8 b) 11 c) 13 d) 10 e) 1
f) 2 g) 4 h) 5 i) 12 j) 6

VIII

1. Vesicular nucleus
2. Axostyle
3. Subpellicular microtubule
4. Stieda body
5. Cytopyge
6. Salivaria
7. Ulceration in intestine
8. Stilbamidine test
9. Stibophen
10. *Eimeria necatrix*

a) Oocyst of Eimeria
b) *Trypanosoma evansi*
c) Bovine surra
d) Oriental sore
e) Trichomonas sp
f) *Giardia lamblia*
g) Test for surra in camels
h) *Trypanosoma theileri*
i) Locomotion
j) *Entamoeba histolytica*
k) Karyosome
l) Mid intestinal coccidiosis
m) Excretion

Ans: 1. f 2. b 3. e 4. a 5. i
6. h 7. j 8. g 9. d 10. l

IX

1. Leucocytozoonosis	a) Ingestion of ticks
2. Trypanosomosis	b) Lymphadenitis and lachrymation
3. Sarcocystosis	c) Interrupted treatment
4. Anaplasmosis	d) Bangkok haemorrhagic disease
5. Hepatozoonosis	e. Wet film examination
6. Toxoplasmosis	f. Bradyzoites in muscles
7. Theileriosis	g. Tumor formation
8. Coccidiosis	h. Anaemia
	i. Congenital anomalies

Ans: 1) c 2) e 3) f 4) h 5) a
6) i 7) b 8) d

X

1. Trypanosomosis	a) Rectal coccidiosis
2. *Leishmania tropica*	b) Culicoides sp
3. *Histomonas meleagridis*	c) Occult trypanosome
4. *Trypanosoma theileri*	d) *Babesia bigemina*
5. Inverse age phenomenon	e) Pseudo cyst
6. *Toxoplasma gondi*	f) *Heterakis gallinae*
7. *Haemoproteus columbae*	g) *Phlebolomus sergenti*
8. *Theileria annulata*	h) Antrycide prosalt
9. Akiba caulleryi	i) *Pseudolynchia maura*
10. *Eimeria zuernii*	j) Hyalomma Sp. Ticks

Ans: 1. h 2. g 3. f 4. c 5. d
6. e 7. i 8. j 9. b 10. a

XI

1. Acetic alum carmine	a) Sparganum
2. Formalin	b) Autoheteroxenous
3. Eosinophils	c) *Toxocara vitulorum*
4. Infection through poultice	d) Paratenic host
5. *Trichinella spiralis*	e) Helminth staining
6. Snail	f) *Tabanus*
7. Giemsa	g) Fixative
8. Transmammary	h) Helminth immunity
9. Garden lizard	i) Protozoan stain
10. Vector	j) Intermediate host

Ans: 1. e 2. g 3. h 4. a 5. b
6. j 7. i 8. c 9. d 10. f

XII

1. Thysanus	a) Amphistomes
2. *Dipylidium caninum*	b) *Oesophagostomum* spp.
3. Plug feeders	c) *Taenia* spp.
4. Stichosome	d) *Raillietina echinobothridia*
5. White spot liver	e) Thorny headed worm
6. Pimply gut	f) Guinea worm
7. Nodular taeniasis	g) *Ascaris suum*
8. Gid	h) *Trichuris* spp.
9. *Dracunculus medinensis*	i) Flea
10. Acanthocephala	j) *Taenia multiceps*

Ans: 1. c 2. i 3. a 4. h 5. g
6. b 7. d 8. j 9. f 10. e

XIII

1. Cestodes	a) Preservative
2. Thormy headed worms	b) Processing nematodes
3. Incomplete metamorphosis	c) Indirect life cycle
4. Lactophenol	d) Acanthocephala
	e. Hemimetabolous

Ans: 1. c 2. d 3. e 4. b

XIV

1. Fasciola gigantica	a) Central nervous system
2. *Echinococcus granulosus*	b) Oribatid mites
3. *Cysticercus tenuicollis*	c) Land snails
4. *Moniezia expansa*	d) Bile ducts
5. *Coenurus cerebralis*	e) Dog
6. Immature amphistomosis	f) Peritoneal cavity
7. Hydatid cyst	g) Rumen
8. *Raillietina tetragona*	h) Mucosa of small intestine
	i) Ants
	j) All organs

Ans: 1. d 2. e 3. f 4. b 5. a 6. h 7. j 8. i

XV

1. Non-Migratory larvae	a) Floatation fluid
2. Faecal culture	b) Knott's method
3. Saturated sodium chloride	c) Baermann's apparatus
4. Egg counting technique	d) Harada Mori method
5. Detection of microfilariae	e) McMaster slide

Ans: 1. c 2. d 3. a 4. e 5. b

XVI

1. Slime balls	a) *Schistosoma nasale*
2. Pork tapeworm	b) *Haemonchus contortus*
3. Actino body formation	c) *Dicrocoelium dendriticum*
4. Self cure	d) Poultry helminthes
5. Darkling beetles	e) *Taenia solium*

Ans: 1. c 2. e 3. a 4. b 5. d

XVII

a) Coracidium	1. Bunostomum
b) Actinobody	2. Cysticerous cellulosae
c) Three lips	3. Oribatid mites
d) Hook worm	4. Fish tapeworm
e) 'Pitto'	5. Toxocarosis
f) Fleas	6. Davainea
g) Moniezia	7. Anoplocephala
h) Butyric smell of breath	8. Nasal schistosomosis
i) Small	9. Dipylidium
j) Pork tapeworm	10. Fischoederius
	11. Ascarids
	12. Hydatid

Ans: a) 4 b) 8 c) 11 d) 1 e)10
f) 9 g) 3 h) 5 i) 6 j) 2

XVIII

a) Red mange	1. Flea bite
b) Stained wool	2. *Dermanyssus gallinae*
c) Scaly leg	3. *Oestrus ovis* fly
d) Red mite	4. Hyalomma
e) Allergic reaction	5. Sheep-ked
f) Soft tick	6. 'Pour-on'
g) Non-feeding	7. Linognathus
h) Longirostrate	8. Canine demodecosis
i) Flumethrin	9. Butcher's jelly
j) Sucking louse	10. Fowl tick
	11. *Cnemidocoptes mutans*
	12. Brown dog tick

Ans: a) 8 b) 5 c) 11 d) 2 e) 1
f) 10 g) 9 h) 4 i) 6 j) 7

XIX

a) *Babesia canis*
b) *Leucocytozoon caulleryi*
c) *Plasmodium vivax*
d) *Haemoproteus columbae*
e) *Trypanosoma equiperdum*
f) *Theilesia annulata*
g) *Toxoplasma gondii*
h) *Eimeria sticdae*

1. Pigeon
2. Horse
3. Cat
4. Dog
5. Poultry
6. Rabbit
7. Human beings
8. Cattle
9. Elephants

Ans: **a) 4** **b) 5** **c) 7** **d) 1** **e) 2**
f) 8 **g) 3** **h) 6**

XX

a) *Cnemidocoptes gallinae*
b) Fowl tick
c) Burrowing
d) Ivermectin
e) Residual spraying
f) Two-host tick
g) Bovine babesiosis
h) Compound eyes

1. Systemic acaricide
2. *Hyalomma* sp.
3. Ommatidium
4. Depluming itch
5. *Boophilus* sp.
6. Fowl pox
7. *Sarcoptes* sp.
8. Argas
9. Control of mosquitoes
10. *Haematopinus* sp.

Ans: **a) 4** **b) 8** **c) 7** **d) 1**
e) 9 **f) 2** **g) 5** **h) 3**

XXI

a) Theileriosis
b) Trypanosomosis
c) Anaplasmosis
cells
d) Babesiosis
e) Amoebiosis
f) Toxoplasmosis
g) Coccidiosis
h) Leishmaniosis
i) Sarcocystosis
j) Leucocytosoonosis
k) Ehrlichiosis

1. Bangkok haemorrhagic disease
2. Congenital anomalies
3. Parasitism in mononuclear phagocytic

4. Bradyzoites in muscle
5. Lymphadenitis & lachrymation
6. Pancytopenia
7. Haemoglobinuria
8. Circling
9. "Pigeon milk" transmission
10. Interrupted treatment
11. Granuloma
12. Anaemia
13. Tumour formation

Ans: **a) 5** **b) 8** **c) 12** **d) 7** **e) 11**
f) 2 **g) 10** **h) 3** **i) 4** **j) 1** **k) 6**

XXII

1. Intermediate host	a) Anthelmintics
2. Binomial nomenclature	b) *Coenurus cerebralis*
3. Holozoic nutrition	c) Arrested larval development
4. Fenbendazole	d) Arthropods (Ticks)
5. Deltamethrin	e) Earthworm
6. Miracidium	f) Harbour asexual stage
7. Transport host	g) Amoeba
8. Hypobiosis	h) Ectoparasiticide
9. Pressure atrophy	i) Carl Linnaeus
10. Vector	j) Trematode

Ans: 1. f 2. i 3. g 4. a 5. h
6. j 7. e 8. c 9. b 10. d

XXIII

1. *Dicrocoelium dendriticum*	a) Nurse cell
2. *Draschia megastoma*	b) Fasciola spp
3. *Trichinella spiralis*	c) Bursati
4. *Stephanofilaria assamensis*	d) Slime balls
5. *Gymnocephalus cercaria*	e) Hump sore

1. d 2. c 3. a 4. e 5. b

CHAPTER 9
VETERINARY MICROBIOLOGY

I. Multiple Choice questions:

1. Acid fast organisms are stained by
   a) Albert's method
   b) Cladius method
   c) Gram's method
   d) Ziehl Neelsen's method

2. Ruska and Knoll developed
   a) Advanced compound microscope
   b) Dark field microscope
   c) Fluorescent microscope
   d) Electron microscope

3. Micro organisms which grow best around "0" degree Celsius are termed as
   a) Mesophiles
   b) Thermophiles
   c) Xerophiles
   d) Psychrophiles

4. The term "animalcule" for microscopic organisms was introduced by
   a) Robert Hook
   b) Robert Koch
   c) Antony Van Leeuwenhock
   d) Lister

5. Organism which uses an organic form of carbon source is
   a) Auxotroph
   b) Hetrotroph
   c) Lithotroph
   d) Organotroph

6. A sporadic disease is one which occurs
   a) In outbreak
   b) Exists already in a population
   c) Occasional occurrence
   d) World wide

7. Periplamic space is present in
   a) Gram negative bacteria
   b) Gram positive bacteria
   c) Mycobacteria
   d) Mycoplasma

8. An organized well defined glycocalyx is called as
   a) Slime layer
   b) Caspule
   c) Endospore
   d) Pseudomurein

9. Period of recovery from a disease condition is called as
   a) Retrospective period
   b) Prodormal period
   c) Convalescent period
   d) Incubation period

10. Taxonomic classification scheme of bacteria can be identified using
   a) Koch's postulates
   b) Binomial nomenclature
   c) Bergey's manual
   d) General classification

11. Variations in virus is caused due to
   a) Mutation
   b) Migration
   c) Transformation
   d) Transconjugation

12. The enzyme needed for DNA replication is
a) Gyrase
b) Ketolase
c) Polymerase
d) Invertase

13. Drug resistance is mediated through
a) Transposons
b) Plasmids and jumping genes
c) Genomic DNA
d) Environment factors

14. Tetracyclins act on
a) Nucleus
b) Protein synthesis
c) DNA replication
d) Cell wall

15. The energy metabolic cycle among the given is
a) TCA cycle
b) Emden Meyer hoff pathway
c) HMP shunt
d) All the above

16. The energy molecules of micro organisms are
a) ATP
b) NAD
c) FAD
d) All the above

17. Spores are destroyed through
a) Pasteurization
b) Tyndalisation
c) Uperization
d) UV sterilization

18. Enriched agar among the given is
a) SD agar
b) Blood agar
c) EMB agar
d) Nutrient agar

19. Surface details of virus particles are studied using
a) Transmission EM
b) Scanning EM
c) Fluorescent Microscope
d) Dark field microscope

20. Primary cell culture is one
a) Which are derived from pieces of nearly dead tissue
b) Which has an infinite doubling time
c) Which has a finite double time
d) Which are immortal

21. Disapproval of spontaneous generation theory by
a) Spallanzani
b) Leeuwenhock
c) Robert koch
d) All the above

22. The infectious agent that lacks nucleic acid is
a) Prions
b) Virusoids
c) Satellite virus
d) Bacteria

23. Filters most commonly used in Laminar air flow unit is
a) Membrane filter
b) Seitz Filter
c) Sintered glass filter
d) HEPA

24. Segmented RNA virus is
a) Bunya virus
b) Picorna virus
c) Paramyxo virus
d) Corona virus

25. Abbe condenser is present in
a) Dark filed microscope
b) Phase contrast microscope
c) Electron microscope
d) Bright field microscope

26. Which of the following statement is not correct
a) Negroes are resistant to Yellow fever
b) Animals are resistant to Syphilis
c) Human beings are resistant to canine distemper
d) Algerain breed of sheep is sensitive to Anthrax

27. Nurse cells are present in
a) Thymus
b) Spleen
c) Lymphnode
d) Payer's Patches

28. A very potent anaphylotoxin is
a) C5b
b) C3a
c) C4a
d) C2a

29. An immunogenic determinant in a protein genrally has molecular weight of
a) 500 Dalton
b) 5000 Dalton
c) 10000 Dalton
d) 45000 Dalton

30. Father of immunogenetics
a) Paul Ehrlich
b) Louis Pasteur
c) Metchnikoff
d) Susumu Tonegowa

31. Prokaryotes with complex cell wall structure characteristics of Gram negative bacteria is
a) Tenericutes
b) Gracilicutes
c) Firmicutes
d) Mendosicutes

32. Gram's iodine in Gram's staining act as
a) Mordant
b) Primary stain
c) Secondary stain
d) Fixative

33. The main component of spore wall is
a) Dipicolinic acid
b) Diaminopimetic acid
c) Mycolic acid
d) Teichoic acid

34. Temperature and duration of sterilization in hot air oven
a) 121°C – 1 hour
b) 220°C – 30 minutes
c) 116°C – 1 hour
d) 160°C – 1 hour

35. Fimbriac are organs of
a) Adhesion
b) Locomotion
c) Ingestion
d) Digestion

36. In Voges-Proskauer reaction a positive reaction is due to the production of
a) Lactic acid
b) Pyruvic acid
c) Butyric acid
d) Acetyl methyl carbinol

37. The commonly used medium for the growth of fungi is
a) Sabouraud's dextrose agar
b) Nutrient agar
c) Blood agar
d) Peptone water

38. Bovine spongiform encephalopathy is caused by
a) Virus
b) Virions
c) Prions
d) Viroids

39. The light source used in fluorescent microscope is
a) Visible light
b) U-V light
c) Beam of electrons
d) Infrared rays

40. Bacteria are highly susceptible to antibiotics during
a) Log phase
b) Decline phase
c) Lag phase
d) Stationary phase

41. Georges Kobler and Cesar Milstein were awarded Nobel Prize for their work on
a) Major histocompatibility complex
b) Development of Radio immunoassay
c) Monoclonal antibody
d) Transplantation immunology

42. Enhancement of virulence of an organism is referred as
a) Exaltation
b) Attenuation
c) Invasiveness
d) Toxigenic

43. IgA is a
a) Monomer
b) Dimer
c) Polymer
d) Pentamer

44. T-Helper cells are
a) CD_4^+
b) CD_8^+
c) CD_3^+
d) Both (a) and (b)

45. The most important cells involved in destruction of virus-infected cells are
a) Macrophages
b) B-cells
c) T_h Cells
d) Cytotoxic T cells

46. Immunity associated with recovery from a disease is termed as
a) Natural active immunity
b) Artificial active immunity
c) Natural passive immunity
d) Artificial passive immunity

47. Complement used for serological assays is usually derived from
a) Guinea pigs
b) Horses
c) Rabbits
d) Hamsters

48. For precipitation test the antigen should be
a) Soluble
b) Insoluble
c) Particulate
d) Colloidal

49. The rapid raise, elevated level and prolonged production of antibody that follows secondary exposure to antigen is known as
a) Autoimmune response
b) Negative feedback
c) Anamnestic response
d) Thymus dependent response

50. Bacteria multiply by
a) Mitosis
b) Meiosis
c) Budding
d) Binary fission

51. Viruses grow in
a) Nutrient agar
b) Blood agar
c) Cell culture
d) Nutrient broth

52. Viruses can be inhibited by
a) Penicillin
b) Sulfonamides
c) Glucose
d) Interferron

53. Newcastle disease virus can be directly visualized by
a) Electron microscopy
b) Light microscopy
c) Fluorescent microscopy
d) Grams stain

54. Bacteria that strictly require oxygen for their growth are called
a) Aerobes
b) Anaerobes
c) Fastidious
d) Fuzzy

55. Bacillus anthracis forms "medusa head" colonies in
a) Blood agar
b) Brilliant green agar
c) Nutrient agar
d) Nutrient broth

56. Louis Pasteur is credited with all of the following except
a) The development of pure culture
b) The germ theory of disease
c) Pasteurization
d) The development of vaccines

57. The magnification of 1000 X would be achieved by
a) An ocular lens of 10X and an objective lens of 100 X
b) An ocular lens of 15 X and an objective lens of 40 X
c) An ocular lens of 100 X and an objective lens of 100 X
d) An ocular lens of 10 X and an objective lens of 10 X

58. The process of killing all the microorganism is called
a) Sterilization
b) Disinfection
c) Sanitation
d) Pasteurization

59. A disinfectant can be evaluated by the following parameter
a) Phenol coefficient
b) Minimum inhibitory concentration
c) Coagulase test
d) Cost of the disinfectant

60. For antibody production co-operative effort between the following are necessary
a) T cells and Macrophages
b) B cells and Macrophages
c) B and T cells
d) B cells, T cells and Macrophages

61. The migration of leucocytes in response to chemical agents is called
a) Phagocytosis
b) Leucocytosis
c) Leucopoenia
d) Chemotaxsis

62. Antibodies are secreted by
a) TH cells
b) Macrophages
c) Basophils
d) Plasma cells

63. Immunity that is important in intra cellular bacterial infection is
a) Humoral immunity
b) Mucosal immunity
c) Cell-mediated immunity
d) Non-specific immunity

64. The following occurs when memory cells are stimulated by antigens to produce the same antibodies again
a) Allergy
b) Anamnestic response
c) Autoimmunity
d) Tolerance

65. A positive TB skin test is an example of
a) Delayed hypersensitivity
b) Immediate hypersensitivity
c) Apthization
d) Variolation

66. Immuno diagnostic procedures detect
a) Antigen
b) Antibodies
c) Antigen and antibodies
d) Antigen, hapten and antibodies

67. A serum containing specific antibodies in large amounts that is used in detecting antigens is
a) Hyperimmune serum
b) Foetal calf serum
c) Agammaglobulin serum
d) Negative control serum

68. A group of serum proteins that are activated by antigen antibody complexes is
a) Complement
b) Albumin
c) Transferrin
d) Insulin

69. Biochemical tests do not have any value in identification of
a) Pasteurella
b) Clostridium
c) Leptospira
d) Staphylococcus

70. Chlamydia can be grown in the embryonated chicken eggs
a) Yolk sac
b) CAM
c) Allantoic fluid
d) Amniotic sac

71. Tetrathionate broth selectively favours the growth of
a) *Escherichia*
b) *Pseudomonas*
c) *Salmonella*
d) *Klebsiella*

72. Proteus is positive for
a) Urease
b) PPA reaction
c) H_2S
d) All the above

73. Phase variation in salmonella can be studied using
a) Craigie tube test
b) CAMP test
c) MAT test
d) SAT test

74. Yersinia enterocolitica shares antigens with
a) *Clostridium*
b) Staphylococcous
c) *Brucella*
d) *Salmonella*

75. Morse code appearance can be seen in
a) *Haemophilus*
b) *Actinobacillus*
c) *Pasteurella*
d) *Bordetella*

76. Long bone is the specimen of choice for
a) Fowl cholera
b) Tetanus
c) Colisepticemia
d) Black quarter

77. Chocolate agar is selective for isolation of *Haemophilus* because it supplies
a) V factor
b) X factor
c) X and V factor
d) NADase

78. Long chain fatty acids for the growth of Leptospira can be supplied by
a) Rabbit serum
b) Agar
c) Beef extract
d) Yeast extract

79. Actinobacillus is closely related with
a) Streptococcus
b) Pasteurella
c) Bacillus
d) Leptospira

80. Cold enrichment is necessary for isolation of
a) *Leptospira*
b) *Listeria*
c) *Streptococci*
d) *Staphylococci*

81. Following are the characteristics of Fusobacterium necrophorum except
a) Obligate anerobe
b) Gram negative
c) Branching filaments
d) Irregular filaments

82. Egg yolk agar used to study the production of
a) Lecithinase
b) Catalase
c) Coagulase
d) Neuraminidase

83. Mouse neutralization test is used for diagnosis of
a) Haemorrhagic septicaemia
b) Enterotoxaemia
c) Anthrax
d) Brucellosis

84. Cell wall antigens of Corynebacterium are related to
a) Mycobacterium
b) Streptococcus
c) a and b
d) None of the above

85. Glycerol favours the growth of
a) *M. tuberculosis*
b) Mycoplasma
c) *M. paratuberculosis*
d) *M. leprae*

86. Tram track appearance is the characteristic feature of
a) *Corynebacterium*
b) *Dermatophilus*
c) *Mycobacterium*
d) Actinobacillosis

87. *Enterobacteriaceae* are differentiated from *Pseudomonadaceae* by
a) Catalase test
b) Coagulase test
c) Hyaluronidase test
d) Oxidase test

88. Fir tree growth in gelatin stab is produced by
a) *B. anthracis*
b) *C. tetani*
c) *L. monocytogenes*
d) *P. vulgaris*

89. Papilloma virus can easily be grown in
a) Chicken embryos
b) Cell cultures
c) Mice
d) None of the above

90. Virus used for production of rabies vaccine
a) Street virus
b) Fixed virus
c) Both
d) None of the above

91. Morbilli viruses possesses
a) Haemagglutinins
b) Neuraminidase
c) Both
d) None of the above

92. Ferret adopted virus used as vaccine for control of
a) Canine distemper
b) Canine hepatitis
c) Canine parvo virus
d) Canine corona virus

93. Amplifying hosts for foot and mouth virus disease
a) Cattle
b) Buffaloe
c) Swine
d) Sheep

94. Aptho virus and Entero viruses can be differentiated using the property of
a) Resistance to acidic pH
b) Sensitive to ether
c) Resistance to heat
d) U.V. inactivation

95. Following are characteristics of Foot and Mouth Disease virus except
a) Virus can be stored at 4°C
b) Sensitive to glycerol
c) Non enveloped virus
d) Washing soda inactivate the virus

96. Viruses transmitted through insect bite
a) Blue tongue virus
b) Fowl pox virus
c) Swine pox virus
d) All the above

97. PPR is antigenically related to
a) Sheep pox virus
b) Fowl pox virus
c) Swine pox virus
d) Rinderpest virus

98. Dwarfing and curling of chicken embryos is the characteristic lesion of
a) Infectious bronchitis virus
b) Fowl pox virus
c) Swine pox virus
d) Chicken pox virus

99. *Bacillus anthracis* is
a) Anaerobic
b) Gram-negative
c) Motile
d) Capsulated

100. Glanders in equines is caused by
a) *Corynebacterium*
b) *Histoplasma*
c) *Streptococci*
d) *Burkholderia*

101. Non-spore forming Gram-negative obligate anaerobe
a) *Clostridium tetani*
b) *Mycobacterium bovis*
c) *Bacillus anthracis*
d) *Fusobacterium necrophorum*

102. Calf diphtheria in cattle caused by
a) Corynebacteria
b) Streptococci
c) Fusobacterium
d) Staphylococci

103. Fowl coryza is caused by
a) *Salmonella pullorum*
b) *Haemophilus gallinarum*
c) *Mycoplasma gallisepticum*
d) *Haemophilus paragallinarum*

104. Major pathogen of mastitis
a) *Escherichia*
b) *Corynebacteria*
c) *Pseudomonas*
d) *Streptococci*

105. Important bacterial pathogen in broiler industry is
a) *Streptococci*
b) *B. anthracis*
c) *Clostridia*
d) *Escherichia*

106. Primary bacterial pathogen of sheep
a) *Staphylococci*
b) *Salmonella*
c) *Listeria*
d) *Clostridia*

107. Fowl Cholera is caused by
a) *P. multocida*
b) *P. pneumotrophica*
c) *P. haemolytica*
d) *P. ureae*

108. Intracytoplasmic indusion bodies are produced by
a) Rabies virus
b) Infectious laryrgotracheitis virus
c) Marek's disease virus
d) Ranikhet disease virus

109. Pox virus acquire envelop from
a) Nuclear membrane
b) Cell wall
c) Golgi apparatus
d) None of the above

110. Foot and mouth virus is
a) Enveloped
b) A DNA virus
c) Non-enveloped
d) None of the above

111. Pock lesions are produced by
a) FMDV
b) NDV
c) Fowl pox
d) RP

112. Orf virus comes under the sub group
a) Parapox virus
b) Capripox virus
c) Unclassified group
d) Orthopox virus

113. RNA containing virus
a) Fowl plague virus
b) Fowl pox virus
c) Duck plague virus
d) Adeno virus

114. Highly contagious viral disease of cattle and which do not affect human is
a) NDV
b) ILT
c) IB
d) RP

115. Encephalo myocarditis virus belongs to
a) *Picornaviridae*
b) *Astroviridae*
c) *Circoviridae*
d) *Iridoviridae*

116. Virus responsible for eradication of small pox from the globe is
a) Sheep pox
b) Goat pox
c) Cow pox
d) Vaccinia

117. Pearl eye is seen in
a) Infectious laryngo tracheitis
b) Infectious bronchitis
c) Lymphoid leucosis
d) Marke's disease

118. A solid bacteriological medium to study the fermentation of lactose
a) Mannitol salt agar
b) Edward's medium
c) Mac Conkey's agar
d) Serum agar

119. Golden yellow pigment is produced by
a) Pathogenic streptococci
b) *Pseudomonas*
c) Pathogenic staphylococci
d) *Salmonella*

120. The bacteria which show a positive staining in modified Z-N method
a) *E. coli*
b) *Leptospira*
c) *Brucella*
d) *Vibrio*

121. Bacteria which require sterol for its grown is
a) *Acholeplasma*
b) *Mycoplasma*
c) *Anaeroplasma*
d) *Thermoplasma*

122. Bacteria which are motile without the presence of flagella
a) *Mycoplasma*
b) *Chlamydia*
c) *Leptospira*
d) *E. coli*

123. Metallic sheen in Eosin methylene blue agar is produced by
a) *Salmonella*
b) *E. coli*
c) *Klebsiella*
d) *Shigella*

124. Enrichment media used for the isolation of salmonella is
a) Serum agar
b) Thiol medium
c) Tetrathionate broth
d) PPLO broth

125. Blue eye is a condition of corneal edema of dogs due to infection with
a) Canine Distemper
b) Canine Parvo virus
c) Infectious Canine Hepatitis virus
d) Canine Adeno virus-2

126. The colonies of mycoplasma look like
a) Mucoid colony
b) Fried egg
c) Smooth colony
d) Dew drop like

127. *Streptococcus pyogenes* belong to Lancefield group
a) A
b) B
c) C
d) D

128. Fowl pox virus belongs to the genus
a) Parapox
b) Avipox
c) Orthopox
d) Capripox

129. Blue tongue virus genome is
a) Segmented ds RNA
b) Non-segmented ds RNA
c) Segmented ds DNA
d) Non-segmented ds DNA

130. Bovine malignant catarrhal fever is caused by
a) Alcelaphine herpes virus
b) Bovine herpes virus-1
c) Bovine herpes virus-2
d) Bovine herpes virus-5

131. Peste des Petits Ruminants (PPR) virus belongs to the family
a) Orthomyxoviridae
b) Paramyxoviridae
c) Picornaviridae
d) None of the above

132. Foot and mouth virus can be cultivated in
a) Suckling mice
b) Foot pads of guinea pigs
c) BHK-21 cell line
d) All of the above

133. The nucleic acid of canine parvovirus is
a) Double stranded RNA
b) Single stranded RNA
c) Double stranded DNA
d) Single stranded DNA

134. Canine distemper virus has
a) Helical symmetry
b) Cubical symmetry
c) Binal symmetry
d) Complex symmetry

135. Moderately pathogenic strains of Newcastle disease virus are known as
a) Velogenic
b) Mesogenic
c) Lentogenic
d) Viscerotropic

136. Rabies can occur in
a) Horses
b) Cattle
c) Dogs
d) All of the above

137. Egg drop syndrome virus belongs to
a) *Adenoviridae* family
b) *Poxviridae* family
c) *Herpesviridae* family
d) *Papillomaviridae* family

138. The most powerful neurotoxin among following Clostridia is that of
a) *Cl. welchii*
b) *Cl. tetani*
c) *Cl. botulinum*
d) *Cl. oedemotiens*

139. Virulence of *B. anthracis* is
a) Encloded in own chromosomal DNA
b) Encloded on plasmid DNA
c) Both (a) and (b)
d) None of the above

140. *B. abortus* commonly affects
a) Sheep and goat
b) Pigs
c) Cattle
d) All the above

141. Leptospira can be observed under
a) Light microscope
b) Inverted microscope
c) Dark field microscope
d) All the above

142. The following is true for Chlamydiae except
a) Have both DNA and RNA
b) Intracellular parasite
c) Multiply by binary fission
d) Do not grow in cell free media

143. Haemorrhagic septicaemia in cattle is caused by
a) *P. multocida*
b) *P. haemolytica*
c) Both the above
d) None of the above

144. Pseudo hyphae are seen in
a) *Aspergillus*
b) *Candida*
c) *Trychophyton*
d) None of the above

145. The following fungi are dimorphic except
a) *C. neoformans*
b) *C. immitis*
c) *C. albicans*
d) *H. capsulatium*

146. Cellular phagocytic theory of immunity was proposed by
a) L. Pasteur
b) Bordet
c) Metchnikoff
d) Pfeiffer

147. Blood serum can be sterilized by
a) Autoclaving
b) Hot air oven
c) Filtration
d) Moist heat on successive days

148. The following trigger the germination of spores except
a) Glucose
b) Lipids
c) Alanine amino acid
d) Adenosine

149. Organisms that can use only molecular oxygen as final H_2 acceptor are called
a) Facultative anaerobes
b) Obligate anaerobes
c) Obligate aerobes
d) None of the above

150. Bacterial cells become larger during
a) Lag phase
b) Log phase
c) Stationary phase
d) Decline phase

151. The antibacterial activity of the following antibiotics is by inhibiting bacterial cell wall except
a) Penicillin
b) Polymyxin
c) Bacitracin
d) Vancomycin

152. The most natural mode of gene transfer in bacteria is by
a) Conjugation
b) Transduction
c) Transformation
d) By none of them

153. Bacteria having a cluster of polar flagella at one pole are known as
a) Peritrichous
b) Lophotrichous
c) Amphitrichous
d) Atrichous

154. Major lethal effect of UV light on bacteria is due to its effect on
a) Ribosomes
b) DNA
c) Mesosomes
d) Proteins

155. The "string of pearls" (chain of cells) on nutrient agar colonies is produced by
a) *Proteus*
b) *B. anthracis*
c) Pneumococci
d) *Salmonella*

156. *Mycoplasma pneumoniae* produces following diseases except
a) Pneumonia
b) Arthritis
c) Urethritis
d) Conjunctivitis

157. The following typhus fevers occur by the bite of invertebrate hosts except
a) Epidemic typhus
b) Rickettsial pox
c) Trench fever
d) Q fever

158. Organims usually found in silage
a) Leptospirae
b) *B. subtilis*
c) *L. monocytogenes*
d) *E. coli*

159. *Cryptococcus neoformans* has special affinity for
a) Lungs
b) Heart
c) CNS
d) Gut

160. Sporangiospores are formed by
a) *Zysomycetes*
b) *Ascomycetes*
c) *Basidiomycetes*
d) *Deuteromycetes*

161. The following viruses induce tumour formation except
a) Retroviruses
b) Herpes viruses
c) Irido viruses
d) Papova viruses

162. Infectious canine hepatitis in dogs produces
a) Pink eye
b) Blue eye
c) Pearly eye
d) None of the above

163. Haemagglutinins are
a) Polysaccharides
b) Proteins
c) Glycoproteins
d) Lipoproteins

164. Helper T cells are distinguished from cytotoxic T cells by the presence of
a) CD2
b) CD4
c) CD3
d) IL-2 receptor

165. The process involved in allowing T cells to survive in the thymus is
a) Positive selection
b) Negative selection
c) Apoptosis
d) Necrosis

166. Tumour immune surveillance may be mediated by
a) Mast cells
b) Neutrophils
c) Langerhans cells
d) NK cells

167. Graft survival can be enhanced without generalized immunosupression by
a) Matching for HLA antigen
b) Anti-thymocye globulin
c) Cyclosproin A therapy
d) Steroids or cytotoxic drugs

168. In autoclave the steam used is
a) Super heated
b) Supersaturated
c) Steam under pressure
d) Supersaturated steam under pressure

169. In ABR test the antigen is usually stained by
a) Methylene blue
b) Crystal violet
c) Tetrazolium
d) None of the above

170. MacConkey's medium does not contain
a) Bile salt
b) Neutral red
c) Lactose
d) Ferric sulphate

171. All strict anaerobes lack one of the following
a) Respiratory enzymes
b) Superoxide dismutase
c) Urease
d) Gelatinase

172. Enzootic abortion in ewes is due to
a) *Chlamydophila*
b) *Brucella*
c) *Campylobacter*
d) *Salmonella ovis*

173. One example for enriched medium is
a) Mac Conkey's agar
b) Blood agar
c) Selenite broth
d) Nutrient broth

174. None of the immunoglobulins can cross the placenta except
a) IgM
b) IgA
c) IgG
d) IgE

175. Shock organ of anaphylaxis in canine is
a) Lungs
b) Liver
c) Spleen
d) Kidney

176. Usual source of complement is pooled serum of
a) Mouse
b) Guinea pig
c) Cattle
d) Horse

177. In standard tube agglutination test the criteria for positivity is
a) 100% clearing
b) 75% clearing
c) 50% clearing
d) 25% clearing

178. Serum sickness is a hypersensitivity reaction of
a) Type I
b) Type II
c) Type III
d) Type IV

179. The following antibiotics act on bacteria by inhibiting protein synthesis except
a) Streptomycin
b) Tetracycline
c) Chloramphenicol
d) Penicillin

180. The most effective chemical disinfectant against FMD virus is
a) 2% formalin
b) 70% alcohol
c) 2% NaOH
d) Phenol

181. Attenuation of virus was first introduced by
a) Louis Pasteur
b) Ellerman and Bang
c) Edward Jenner
d) Robert Koch

182. Infectious Bovine Rhinotracheitis virus belongs to the family
a) Orthomyxoviridae
b) Herpes viridae
c) Paramyxoviridae
d) Adenoviridae

183. The true reservoir host of rabies virus is
a) Vampire bats
b) Dogs
c) Wolves
d) Foxes

184. The first animal virus against which a genetically engineered vaccine was produced is
a) Rinderpest
b) Rabies
c) FMD virus
d) Influenza

185. Natural hosts for EDS-76 virus are
a) Ducks
b) Chicken
c) Quails
d) Turkeys

186. Which of the following species is considered as the dead end host for malignant Catarrhal fever
a) Wild beest
b) Deer
c) Pig
d) Cattle

187. Fungi which do not have sexual life cycle belong to the class
a) Zygomycetes
b) Ascomycetes
c) Deuteromycetes
d) Basidiomycetes

188. Dimorphism is a feature of the following except
a) Sporothrix
b) Coccidioides
c) Fusarium
d) Blastomyces

189. Existence of *Rhizobium* inside plant nodes is a good example for
a) Commensalism
b) Synergism
c) Symbiosis
d) Antibiosis

190. Example for Gram negative cocci
a) *Staphylococcus aureus*
b) *Streptococcus pyogenes*
c) *Neisseria meningitides*
d) *Pasteurella mutocida*

191. Most viruses have all the following except
a) Centrally located nucleic acid
b) Either DNA or RNA
c) A protein coat
d) Both DNA and RNA

192. One proteolytic *Clostridium*
a) C .*chauvoei*
b) *C. tetani*
c) *C. oedematiens*
d) *C. septicum*

193. Screening of birds against salmonellosis is generally done by
a) Coomb's test
b) Passive haemagglutination
c) Rapid plate agglutination test
d) Precipitation test

194. Liquid paraffin is sterilized by
a) Hot air oven
b) Filtration
c) Autoclaving
d) UV irradiation

195. A negative CFT is indicated by
a) Haemolysis
b) Absence of haemolysis
c) Haemagglutination
d) Absence of haemagglutination

196. Pulpy kidney disease is caused by
a) *Clostridium perfringens* type A
b) *Clostridium perfringens* type B
c) *Clostridium perfringens* type C
d) *Clostridium perfringens* type D

197. Diamond skin disease is caused by
a) *Erysipelothrix rhusiopathiae*
b) *Listeria monocytogenes*
c) *Brucella suis*
d) *Streptococcus pyogenes*

198. Imperial Bacteriology was started in India to investigate the etiology of
a) Rinderpest
b) Anthrax
c) FMD
d) Brucellosis

199. A positive Feulgen reaction is typical of
a) RNA
b) DNA
c) Capsular antigen
d) H antigen

200. CAMP test is used to detect
a) *Streptococcus agalactiae*
b) *Streptococcus dysgalactiae*
c) *Streptococcus uberis*
d) *Streptococcus suis*

201. Active immunity is not given by
a) Killed vaccine
b) Hyperimmune serum
c) Live vaccine
d) Infection

202. Bence Jone's proteins are
a) Plasma proteins
b) IgM
c) Heavy chains of Ig
d) Light chains of Ig

203. Erythroblastosis foetalis is a
a) Type III hypersensitivity reaction
b) Allergic reaction
c) Cytotoxic hypersensitivity reaction
d) Delayed type hypersensitivity

204. The nucleic acid of the following viruses is a single molecule of single stranded RNA except in
a) Orthomyxovirus
b) Paramyxovirus
c) Picorna virus
d) Toga virus

205. The nucleic acid of the following viruses have negative polarity except
a) Paramyxovirus
b) Flavi virus
c) Filo virus
d) Orthomyxovirus

206. Wooden tongue in cattle is produced by
a) *Actinomyces bovis*
b) *Nocardia farcinica*
c) *Actinobacillus lignieresii*
d) *Staphylococcus aureus*

207. Fayding puppy disease is caused by
a) *Actinobacillus*
b) *Salmonella enteritidis*
c) *Klebsiella pneumoniae*
d) *E.coli*

208. Fowl typhoid is produced by
a) *Salmonella typhi*
b) *Salmonella pullorum*
c) *Salmonella paratyphi*
d) *Salmonella gallinarum*

209. Yeast cell reproduce by
a) Binary fission
b) Fragmentation
c) Budding
d) Sporulation

210. Mucuromycosis is caused by the following except
a) *Rhizopus* sp.
b) *Mucor* sp.
c) *Absidia* sp.
d) *Penicillium* sp.

211. Toxin of *Bacillus anthracis* possess the following factors except
a) Edema factor
b) Hemolytic factor
c) Protective antigen
d) Lethal factor

212. Amino acids are incorporated in the cell culture medium
a) To act as a source of energy
b) For activation of enzymes of cellular metabolism
c) For incorporation into cellular proteins
d) For better adhesion of cells on to the substrate

213. Heat inactivation of IgE leads to the loss of
a) Tissue fixation property
b) Antigen binding capacity
c) Complement activation
d) All the above

214. Drumstick shaped sporulating organism is
a) *Clostridium chauvoei*
b) *Clostridium perfringens*
c) *Clostridium tetani*
d) *Clostridium botulinum*

215. The ability of serum to kill Gram negative bacteria is proportional to the amount of
a) Beta lysine
b) Antibody and complement
c) Blood cells
d) Fibrin

216. The cell that possesses Fc receptors for IgE is
a) Plasma cell
b) Macrophage
c) Mast cell
d) Neutrophil

217. Systemic lupus erythematosis is an autoimmune disease wherein antibodies are produced against the host's
a) Proteins
b) DNA
c) RNA
d) Thyroglobulin

218. Which of the following is not true with the capsid proteins
a) Decide the host cell to be infected
b) Protect viral nucleic acids
c) Carry protective antigens
d) Act as the initiation unit of replication

219. Primary cell cultures are preferred for primary isolation of virus because
a) Highly sensitive
b) Produce low titre of virus
c) Consists of a mixture of cells
d) Occasional presence of latent virus

220. Following bacterial agents may be transmitted through egg except
a) Tubercle bacilli
b) Mycoplasma
c) Salmonella
d) Chlamydia

221. Lesions in feline infectious peritonitis are associated with
a) Cytolytic infection
b) Latent infection
c) Immune complexes
d) Persistent infection

222. The following species can be infected with FMD virus except
a) Sheep and goat
b) Cattle and buffaloe
c) Pigs
d) Horses

223. Calves are protected from rotavirus infection by
a) Circulating anti-rotavirus antibody
b) Intestinal antibodies
c) Endogenous interferon within the gut
d) Cell mediated immunity

224. COFAL test is used in the diagnosis of
a) Equine infectious anaemia
b) Human immunodeficiency virus
c) Avian leukosis
d) Bovine leukaemia

225. Duck plague in India was first reported from
a) West Bengal
b) Kerala
c) Tamil Nadu
d) Assam

226. Immune interferon is of type
a) Alpha
b) Beta
c) Gamma
d) Delta

227. An organism which produces acid butt and alkali slant on TSI
a) E. coli
b) Klebsiella
c) Enterobacter
d) Salmonella

228. A cell culture system preferred for primary isolation of FMD virus is
a) Bovine thyroid cells
b) Bovine kidney cells
c) VERO cell line
d) Bovine embryonic lung cells

229. The use of agar to solidify the media was introduced by
a) Robert Koch
b) Frau Hesse
c) John Petri
d) Louis Pasteur

230. Campylobacter infected bulls will show
a) Lameness
b) Unilateral orchitis
c) Bilateral orchitis
d) No symptoms

231. Vector used for cloning large fragments of eukaryotic DNA is
a) Bacteriophage
b) Lambda-phage
c) Cosmid
d) Plasmid

232. Summer mastitis is caused by
a) *Staphylococcus aureus*
b) *Streptococcus agalactiae*
c) *E. coli*
d) *Arcanobacterium pyogenes*

233. Organism causing Kennel Cough
a) *Bordetella bronchiseptica*
b) *Bordetella pertussis*
c) *Haemophilus influenza*
d) *Strptococcus pneumoniae*

234. CRD is produced by
a) *Mycoplasma gallinarum*
b) *Mycoplasma gallisepticum*
b) *Mycoplasma synoviae*
d) *Mycoplasma hyopneumoniae*

235. Laboratory cultivation of *Rhinosporidium seeberii* can be done in
a) Sabouraud's agar
b) Cornmeal agar
c) Potato agar
d) None of the above

236. The following produce ectothrix infection and have small spores except
a) *Microsporum canis*
b) *Microsporum equinum*
c) *Microsporum gypseum*
d) *Trichophyton mentagrophytes*

237. Optimum pH of the media to be used for cultivation of yeast is
a) 3.5-3.8
b) 5.8-6.2
c) 7.4-7.8
d) 9.5-9.8

238. Secretory piece of IgA is produced by
a) Epithelial cells
b) Plasma cells
c) Reticuloendothelial cells
d) T lymphocytes

239. Autoimmune disease with characteristic response to autologous IgG is
a) Pernicious anaemia
b) Milk allergy
c) Male infertility
d) Rheumatoid arthritis

240. Immunoglobulins are classified on the basis of the antigenecity of the
a) Constant region of 'L' chain
b) Variable region of 'L' chain
c) Constant region of 'H' chain
d) Variable region of 'H' chain

241. Heterophile antigens are
a) Unrelated antigens
b) Shared antigens
c) Autoantigens
d) Alloantigens

242. Nude mouse lacks
a) Thymus
b) Thyroid
c) Testes
d) Teeth

243. Cathode moving protein of serum in electrophoresis at pH 8.5 is
a) Albumin
b) Alpha globulin
c) Beta globulin
d) Gamma globulin

244. The bacterial antigen which is more resistant to chemical and physical agents
a) Vi antigen
b) K antigen
c) O antigen
d) H antigen

245. Infectious bursal disease virus has the following characters except
a) Double stranded RNA
b) Nucleic acid in two segments
c) Can be propagated in developing chick embryos
d) Transmitted by insects

246. For multiplication, complete uncoating is a must except in
a) Picornavirus
b) Reovirus
c) Calicivirus
d) Poxvirus

247. Syncytium or giant cell formation is a feature of
a) Paramyxovirus
b) Picornavirus
c) Adenovirus
d) Influenza virus

248. Intracytoplasmic inclusion bodies are produced by
a) Infectious laryngeotracheitis virus
b) Inclusion body hepatitis virus
c) Avian influenza virus
d) Pox virus

249. The best route of chicken embryo inoculation for isolation of blue tongue virus is
a) Allantoic cavity
b) Intravenous
c) Chorio allantoic cavity
d) Yolk sac

250. Interferons are
a) Cell coded proteins
b) Virus coded low molecular weight glycoproteins
c) Cell coded low molecular weight glycoproteins
d) None of the above

251. Bacterial fimbriae have one of the following functions
a) Attachment
b) Motility
c) Penetration
d) Production of toxins

252. Heart water disease in cattle is due to
a) *Rickettsia prowazaki*
b) *Rickettsia Quintana*
c) *Ehrlichia bovis*
d) *Ehrlichia ruminantium*

253. The primary lymphoid organs in mammals are
a) Thymus and bursa
b) Thymus and bone marrow
b) Thymus and spleen
d) Bone marrow and spleen

254. Adaptive enzyme is produced
a) Whether the substrate on which it acts exists or not
b) When there is a need for it
c) When the optimum temperature is given
d) When the optimum pH is provided

255. ATP is produced by substrate level phosphorylation in
a) Fermentative catabolism
b) Respiratory catabolism
c) Anabolism
d) None of the above

256. Toxin responsible for enterotoxaemia in sheep
a) Alpha toxin
b) Beta toxin
c) Epsilon toxin
d) Iota toxin

257. For diagnosis of anthrax infection in pigs, the following specimen is ideal
a) Blood smear
b) Smear from throat swelling
c) Smear from intestinal content
d) Smear from nasal exudates

258. Louis Pasteur is called
a) Father of Bacteriology
b) Father of Modern Bacteriology
c) Father of Modern Microbiology
d) Father of Medicine

259. Non ionizing radiation use
a) Alpha rays
b) Beta rays
c) Gamma rays
d) UV rays

260. Among the poultry salmonellae the one that is very important from the zoonotic point of view is
a) *S. pullorum*
b) *S. gallinarum*
c) *S. enteritidis*
d) *S. Arizona*

261. *Listeria* are motile at
a) 37 ° C
b) 40 ° C
c) 25 ° C
d) 45 ° C

262. The quellung reaction is used for typing of
a) *Staphylococcus*
b) *Pasteurella*
c) *Pneumococcus*
d) None of the above

263. *Campylobacter jejuni* grow at
a) 25 ° C
b) 42 ° C
c) 33 ° C
d) 37 ° C

264. The use of cotton plug in lab procedures was introduced by
a) Schroeder and Dusch
b) Herman Hoffman
c) Weigert
d) Robert Koch

265. The greatest possible NA of a dry lens cannot exceed
a) 1
b) 1.5
c) 2
d) 1.25

266. The capacity of an objective to render the outline of the image of the object clear and distinct is
a) Magnification
b) Definition
c) Resolution
d) None of these

267. Which among the following is a negative ocular/ eye piece
a) Ramsden eye piece
b) Compensating eye piece
c) Huygenian eye piece
d) None of these

268. A dye which is used in immunofluorescence is
a) Lissamine rhodamine B
b) Cy3
c) None of these
d) Both of these

269. The highest taxonomic rank used in bacterial classification is
a) Phylum
b) Order
c) Domain
d) Class

270. A strain with distinctive antigenic properties is called a
a) Pathovar
b) Porhovar
c) Phagovar
d) Serovar

271. The five kingdom system of classification was proposed by
a) Whittaker
b) Haeckel
c) Linnaeus
d) Carl Woese

272. A method of measurement of size of bacteria is
a) By using a stage micrometer in conjunction with a micrometer eyepiece
b) Photographic method
c) Electron microscopic method
d) All of these

273. The living together of two species one of which is benefited by the association where as the other is neither benefited nor harmed.
a) Commensalism
b) Antibiosis
c) Synergism
d) Symbiosis

274. A major surface antigen of Gram positive bacteria is
a) O antigen
b) Techoic acid
c) LPS
d) None of these

275. In osmotically protective media, removal of cell wall from Gram positive bacteria with lysozyme or blocking peptidoglycan biosynthesis with penicillin liberates
a) Spheroplasts
b) Protoplasts
c) None of these
d) Both

276. Capsular antigen is also called as
a) O antigen
b) F antigen
c) K antigen
d) H antigen

277. Benign connective tissue tumour of horses known as Equine sarcoids
a) Retrovirus
b) Pappilloma virus
c) Polioma virus
d) Herpes virus

278. The heat resistance of bacterial endospores is due to
a) Dehydration
b) Layered structure
c) Calcium dipicolinate
d) All of these

279. Bacterial growth rate is determined during
a) Log phase
b) Lag phase
c) Stationary phase
d) Death phase

280. Those organisms which are able to grow best at temperatures in the range of 20 to 30°C are called
a) Psychrophiles
b) Psychrotrophs
c) Mesophiles
d) Thermophiles

281. The lowest temperature for complete destruction of a bacterial suspension in an aqueous solution. Here the time is fixed and temperature varies
a) Thermal death time
b) Thermal death point
c) Phenol coefficient
d) D value

282. Canine Distemper virus attacks puppies
a) Below 3 weeks of age
b) Between 3-6 weeks of age
c) Between 3-6 months of age
d) Above 1 year of age

283. An example of an enriched medium is
a) Blood agar
b) MacConkey agar
c) Nutrient agar
d) Selenite broth

284. The level of incorporation of agar in culture medium is
a) 7.5%
b) 5%
c) 10%
d) 2%

285. The concentration of serum in maintenance medium for tissue culture is
a) 1-2%
b) 5 - 10%
c) 10 -20%
d) None of these

286. Tracheal ring culture is an example for
a) Cell line
b) Tissue culture
c) Organ culture
d) Maitland culture

287. The age of the embryo for performing chorioallantoic membrane route of inoculation is
a) 9-11 days
b) 10 -12 days
c) 5-7 days
d) None of these

288. Sabouraud's dextrose agar is an example for
a) Enrichment medium
b) Fungal culture medium
c) Selective medium
d) None of these

289. Following are the properties of exotoxins except
a) Produced by bacteria and diffuse into the medium
b) Highly immunogenic
c) Thermolabile
d) Non-specific action

290. The following are attributes of innate immunity except
a) Acts non – specifically
b) Does not require prior contact
c) Retains memory
d) Components are present before the onset of infection

291. When an animal is vaccinated it gets
a) Natural active acquired immunity
b) Artificial active acquired immunity
c) Natural passive acquired immunity
d) Artificial passive acquired immunity

292. The following are attributes of primary lymphoid organs except
a) Ectodermal or endodermal in origin
b) Involutes after puberty
c) Develops early in embryonic life
d) Responsive to antigens

293. The T dependent area in the lymph node is
a) Cortex
b) Paracortex
c) Medulla
d) None of these

294. The hinge region of immunoglobulin is rich in
a) Proline
b) Alanine
c) Tyrosine
d) Glycine

295. Cleavage of immunoglobulin molecule with papain gives rise to
a) Two Fab fragments & a single Fc fragment
b) Disulfide linked Fab fragments & extensively degraded Fc fragment
c) Separated heavy and light chains
d) None of these

296. The serum half life of IgG is
a) 23 days
b) 2 days
c) 3 days
d) None of these

297. Example of a primary binding test is
a) Radio immuno assay b) Oudin test
c) Agglutination d) Precipitation

298. The following are antigen presenting cells except
a) Macrophages b) Dendritic cells
c) Neutrophils d) B cells

299. The side chain theory of antibody production was put forward by
a) Paul Ehrlich b) Brunet
c) Breinl and Haurowitz d) None of these

300. Mancini test is
a) Double diffusion in two dimension b) Double diffusion in one dimension
c) Single diffusion in one dimension d) Single diffusion in two dimension

301. The serological test used to diagnose equine infectious anemia in horses
a) Weil – Felix Reaction b) Coggin's test
c) Schick test d) Stormont test

302. The C4b2a complex is called the
a) C3 convertase in the alternative pathway
b) C5 convertase in the alternative pathway
c) C3 convertase in the classical pathway
d) C5 convertase in the classical pathway

303. The activity of C3 convertase in the alternative pathway is extended by attachment of
a) Factor H b) Properdin
c) Factor I d) None of these

304. IgE mediated hypersensitivity is
a) Type I b) Type II
c) Type III d) Type IV

305. Immune interferon is the name given for
a) α interferon b) β interferon
c) γ interferon d) None of these

306. The following are properties of interferons except
a) Host specific b) Specific for a particular antigen
c) Has low molecular weight d) Delayed action

307. Many exotoxins when treated with a mild protein denaturing agent lose their toxicity but retain their antigenicity and toxins modified in this manner are called
a) Toxoids b) Antitoxins
c) Bacterins d) None of these

308. The following are true for immunoglobulin A except
a) Can activate the complement
b) Cannot act as opsonins
c) Agglutinate particulate antigen and neutralize viruses
d) Can act inside cells.

309. The strength of antigen – antibody binding when multiple epitopes on an antigen interact with multiple binding sites of an antibody is
a) Anergy
b) Avidity
c) Affinity
d) Atopy

310. The dose (of antiserum) required to protect 50% of a group of animals is called
a) LD_{50}
b) ID_{50}
c) PD_{50}
d) CH_{50}

311. Cytotoxic T cells trigger apoptosis by
a) Perforin pathway
b) CD95 pathway
c) Both
d) None of these

312. The condition "Blue eye" in dogs is an example for
a) Type IV Hypersensitivity
b) Type II Hypersensitivity
c) Type III Hypersensitivity
d) Type II Hypersensitivity

313. The following are true for attenuated vaccines except
a) Gets amplified in the system
b) Smaller volumes given
c) No possibility of excretion
d) Short shelf life

314. Capsule of virulent strains of Bacillus anthracis is made up of
a) Hyaluronic acid
b) Gamma glutamyl polypeptide
c) Polysaccharide
d) Mycolic acid

315. Black disease in sheep is caused by
a) *Clostridium novyi type A*
b) *Clostridium novyi type B*
c) *Clostridium septicum*
d) *Clostridium perfringens*

316. Diene's staining is used for identifying ----------
a) Chlamydia
b) Mycobacteria
c) Mycoplasma
d) Listeria

317. *Hemophilus influenza* grows best on
a) Blood agar
b) Chocolate agar
c) Mac Conkey agar
d) BGA

318. Milk ring test is used for diagnosis of
a) Bovine tuberculosis
b) Bovine brucellosis
c) Bovine mastitis
d) Milk fever

319. Strangles is caused by
a) *Streptococcus agalactia*
b) *Streptococcus suis*
c) *Streptococcus equi*
d) *S..zoopeidemicus*

320. Pseudo hyphae are seen in
a) Aspergillus
b) Candida
c) Trychophyton
d) None of the above

321. Duck plague virus can produce disease in the following species except
a) Domestic ducks
b) Wild ducks
c) Geese and swans
d) Chickens

322. Selective media for Listeria is
a) MCA
b) PALCAM
c) Chocolate agar
d) BGA

323. Nagler's reaction with *Clostridium perfringens* on egg yolk agar is due to
a) Collaginase
b) Lipase
c) Lecithinase
d) Phospholipase

324. Dissemination of ---------- organism in sheep & goat produce thin ewe/ ill thrift
a) *Corynebacterium ovis*
b) *Mycobacterium pseudotuberculosis*
c) *Chlamydia psittaci*
d) *Brucella melitensis*

325. Cutaneous Streptothricosis is caused by
a) *Trichophyton mentagrophytes*
b) *Dermatophilus congolensis*
c) *Candida albicans*
d) *Streptococcus zooepidemicus*

326. Hotis test is used to diagnose
a) *Streptococcus agalactia*
b) *Staphylococcus aureus*
c) *Sporothrix schencki*
d) *M. tuberculosis*

327. Mycobactin is required for the cultivation of
a) *M. tuberculosis*
b) *M. johnei*
c) *M. phlei*
d) *M. avium*

328. Vi antigen is found in
a) *Salmonella pullorum*
b) *S. gallinarum*
c) *S. typhi*
d) *S. dublin*

329. ---------- of Chlamydia are infective
a) Reticulate body
b) Elementary body
c) Not a & b
d) Both a & b

330. Fowl coryza is caused by
a) *H. influenza*
b) *H. gallinarum*
c) *P. multocida*
d) *Mycoplasma gallisepticum*

331. Selective media of Staphylococcus
a) SS agar
b) Blood agar
c) Manitol salt agar
d) Stone brinks media

332. Button ulcers in the lungs and airsac are characteristic of_____infection.
a) *Candida albicans* b) *Mycobacterium tuberculosis*
c) *Aspergillus spp* d) *Bordetella bronchiseptica*

333. + + - - of IMViC reaction is produced by
a) Salmonella b) Klebsiella
c) *E. coli* d) Enterobacter

334. Disease caused by Rickettsia rickettsi
a) Rocky mountain spotted fever b) Scrub typhus
c) Kyasanur forest disease d) Q- fever

335. Capsomers are held together by
a) Covalent bonds b) Non-covalent bonds
c) Hydrogen bonds d) Ionic bonds

336. CPE of ND virus
a) Syncytium formation b) Rounding and shrinkage
c) Cell size increase d) Transformation

337. Who identified the first animal virus
a) Louis Pasteur b) Robert Koch
c) Loeffler& Frosch d) Beijerinck

338. Virus possess double capsid
a) Reo virus b) Corona virus
c) Rhabdo virus d) Toga virus

339. Greenish discoloration of allantoic fluid is characteristic after inoculation with
a) Duck hepatitis A virus b) Duck viral enteritis
c) IBD d) IB

340. Function of calcium in balanced salt solution is
a) Helps in adhesion of cells b) Act as enzyme activator
c) Maintains osmotic pressure d) a & b

341. Cleavage of ---------- determines virulence of avian influenza virus
a) Haemagglutinin b) Neuraminidase
c) Fusion protein d) Both heamagglutinin & neuraminidase

342. Wood's lamp uses ---------- light for diagnosis of dermatophyte infection.
a) Ordinary day light b) UV light
c) Infra red light d) Fluorescent light

343. Important reservoir of avian influenza.
a) Wild migratory birds b) Recovered birds
c) Japanese quails d) Ducks

344. Genus specific epitopes of adenoviruses are located on the
a) Pentamers
b) Hexamers
c) Axon fibers
d) Envelope

345. Fowl pox can be cultivated in chicken embryo by _____route
a) Allantoic route
b) CAM route
c) Yolk sac route
d) Intravenous route

346. Virus having skew arrangement
a) Pox virus
b) Orthomyxovirus
c) Adenovirus
d) Papova virus

347. Curling and drawfing of embryo is an evidence of ---------- viral replication
a) IBD virus
b) ND virus
c) IB virus
d) EDS virus

348. Transcriptases and cell shut down proteins are
a) Structural proteins
b) Nonstructional proteins
c) Matrix protein
d) Envelope proteins

349. Following are cytoplasmic virus, except
a) Adeno virus
b) Pox virus
c) Hepadna virus
d) Irido virus

350. Based on morphology, orbi virus is ---------- shaped.
a) Bullet
b) Cart-wheel
c) Ring
d) Crown

351. ---------- virus has no haemagglunation property but has haemadsoption property.
a) ND virus
b) ASF virus
c) Corona virus
d) CSF virus

352. Infectious progeny virus are not synthesized in
a) Chronic infection
b) Latent infection
c) Abortive infection
d) Subclinical infection

353. Fowl pox virus is antigenically related to
a) Pigeon pox
b) Canary pox
c) Turkey pox
d) All the above

354. END method is commonly used to diagnose
a) Swine fever
b) Gumbora disease
c) ILT
d) Vesicular stomatitis

355. Identify the disease where there is no vertical transmission
a) Pullorum disease
b) Duck plague
c) Marek's disease
d) ILT

356. Coggin's test is used to diagnose
a) Chicken infectious anemia
b) Equine infectious anemia
c) BT
d) IBD

357. Following diseases can be diagnosed by demonstration of inclusion bodies, except
a) Canine distemper
b) ILT
c) Cow pox
d) Orf

358. Zebra marking in large intestine of affected animals are seen in
a) Rinderpest
b) FMD
c) Bovine viral diarrhea
d) Swine fever

359. A fluorescent dye used to label antibodies
a) Fluorescene isothiocyanate
b) Texas Red
c) Lissamine rhodamine
d) All of these

360. Compounds of benzene containing chromophore radicals are called
a) Chromogens
b) Leucocompounds
c) Auxochromes
d) None of these

361. When lipopolysaccharide is split, into Lipid A and polysaccharide, toxicity is associated with
a) Lipid A
b) Polysaccharide
c) Both of these
d) None of these

362. Hiss method and Butt, Bonynge and Joyce method are methods to demonstrate
a) Fimbria
b) Fagella
c) Capsule
d) Spore

363. Heat resistance of spores is due to
a) Dehydrated state
b) Low metabolic activity
c) Presence of large amounts of calcium dipicolinate
d) All of these

364. The holding time, temperature and pressure combination in an autoclave
a) 15 minutes at 121°C and 15 lbs/in^2
b) 15 minutes at 110°C and 10 lbs/in^2
c) 15 minutes at 115°C and 10 lbs/in^2
d) 15 minutes at 121°C and 10 lbs/in^2

365. When one purine is replaced by another purine and a pyrimidine is replaced by a different pyrimidine it is called as
a) Transition
b) Transversion
c) Both a and b
d) None of these

366. Which is not a dimorphic fungi
a) *Sporothrix schenckii*
b) *Histoplasma capsulatum*
c) *Candida albicans*
d) *Coccidioides immitis*

367. Non motile spores of *Rhizopus* spp. (Zygomycetes) containing several nuclei
a) Blastospores
b) Aplanospores
c) Zygospores
d) Zoospores

368. Multiseptate, fusiform thick walled macroconidia are characteristic of
a) *Microsporum* spp.
b) *Trichophyton* spp.
c) *Epidermophyton* spp.
d) None of these

369. The scientist who identified the method of transduction
a) Isaacs and Lindemann
b) Kohler and Milstein
c) Kitasato and von Behring
d) Zinder and Lederberg

370. The most frequent lesion introduced into DNA by UV irradiation is
a) Thymine dimers
b) Cytosine dimers
c) Thymine – cytosine dimers
d) None of these

371. Example of a selective medium
a) Nutrient agar
b) Serum agar
c) Mac Conkey agar
d) Blood agar

372. The indicator used in sugar fermentation test
a) Andrade's indicator
b) Kovac's reagent
c) Methyl red
d) Neutral red

373. Boener filter is an example of
a) Membrane filter
b) Porcelain filter
c) Asbestos filter
d) Earthenware filter

374. The thickest layer of the spore envelope
a) Spore coat
b) Spore cortex
c) Spore coat
d) Exosporium

375. The immunoglobulin found in highest concentration in serum
a) IgM
b) IgG
c) IgE
d) IgA

376. A secondary binding test used to detect antigen in tissues
a) Western blotting
b) Agar gel immunodiffusion test
c) Immunoperoxidase test
d) Agglutination

377. How is complement inactivated (time – temperature combination)?
a) 15 minutes at 56°C
b) 30 minutes at 54°C
c) 30 minutes at 56°C
d) 15 minutes at 54°C

378. Immune complex mediated hypersensitivity is otherwise called as
a) Type I
b) Type II
c) Type III
d) Type IV

379. Balonoposthitis in breeding bulls is a condition caused by
a) Brucella abortus
b) Infectious kerato conjunctivitis virus
c) Campylobacter fetus subsp fetus
d) Infectious Bovine Rhino tracheitis

380. Immunoglobulin E is also called as
a) Cytophilic antibody
b) Reaginic antibody
c) Macroglobulin
d) Cytotrophic antibody

381. The first immunoglobulin class produced in a primary immune response is
a) IgM
b) IgG
c) IgY
d) IgA

382. In dimeric IgA, the two units are joined by
a) J chain
b) Secretory piece
c) Calnexin
d) Disulphide linkage

383. The C3 convertase in the alternative pathway is
a) C4b2a3b
b) C3bBb
c) C4b2a
d) None of these

384. C1 inhibitor affects which pathway of complement activation?
a) Indirect pathway
b) Classical pathway
c) Alternative pathway
d) None of these

385. Example of a natural local type III hypersensitivity condition in dogs
a) Blue eye
b) Hay sickness
c) Serum sickness
d) None of these

386. The immunoglobulin that do not have a hinge region are
a) IgG
b) IgM
c) IgA
d) IgD

387. Mature macrophages in bone marrow
a) Histiocyte
b) Osteoclast
c) Mesangial cells
d) Kupffer cells

388. Which antigen of bacteria is destroyed by heating at 100°C or by treatment with alcohol/dilute acids
a) O antigen
b) H antigen
c) Both O and H
d) None of these

389. The major source of interleukin 1
a) Eosinophils
b) Macrophages
c) Neutrophil
d) Mast cell

390. The organ that filters antigens from blood
a) Liver
b) Spleen
c) Lymph node
d) Thymus

391. The distinguishing glycoprotein seen on surface of T helper cells.
a) CD 4
b) CD 32
c) CD 23
d) None of these

392. The cell that mediate ADCC
a) NK cells
b) Macrophages
c) Eosinophils
d) All of these

393. The Type of hypersensitivity occurring within the humoral branch of the immune system is
a) Type I
b) Type I and II
c) Type I, II and III
d) Type I, II, III and IV

394. A systemic autoimmune disease in which the B cells respond to many different autoantigens
a) Systemic lupus erythematosus
b) Rheumatoid arthritis
c) Vogt-Koyanagi-Harada syndrome
d) None of these

395. Cytotoxic T cells trigger apoptosis by
a) Endocytic pathway
b) Perforin pathway
c) Cytosolic pathway
d) None of these

396. The C3 convertase activity of C3bBb has a half life of only 5 minutes unless it binds to
a) Factor H
b) Properdin
c) Factor I
d) Cell surface

397. Serological test used for the diagnosis of anthrax in animals
a) Anton's test
b) Straus test
c) Ascoli's test
d) Hotis test

398. Quail's disease is caused by
a) *Clostridium septicum*
b) *Clostridium novyi*
c) *Clostridium botulinum*
d) *Clostridium colinum*

399. Metachromatic granules are seen in genus
a) *Corynebacterium*
b) *Clostridium*
c) *Bacillus*
d) *Listeria*

400. Organism which is positive for MZN staining
a) *Actinomyces*
b) *Nocardia*
c) *Listeria*
d) *Erysipelothrix*

401. Causative agent of Lumpy jaw
a) *Actinobacillus lignieresii*
b) *Actinomyces bovis*
c) *Bacillus cereus*
d) *Corynebacterium pseudotuberculosis*

402. Cold enrichment is used for isolation of
a) *Rhodococcus equi*
b) *Listeria monocystogenes*
c) *Erysipelothrix rhusiopathiae*
d) *Pasteurella multocida*

403. Test tube brush like growth in gelatin stab is characteristic of
a) *Erysipelothrix rhusiopathiae* b) *Listeria monocytogens*
c) *Bacillus anthracis* d) *Clostridium chauvoei*

404. Selective medium for isolation of *S.aureus*
a) Edward's medium b) Levinthal's medium
c) Mannitol Salt agar d) Skirrow's agar

405. Stonebrink's medium is used for the isolation of
a) *Mycobacterium tuberculosis* b) *Mycobacterium bovis*
c) *Mycobacterium avium* d) *Mycobacterium marinum*

406. Bacillus of green pus
a) *Pseudomonas aeruginosa* b) *Aeromonas salmonicida*
c) *Chromobacterium violaceum* d) *Mycobacterium paratuberculosis*

407. Morse code appearance is a feature of
a) *Actinomyces bovis* b) *Actinomyces israelii*
c) *Actinobacillus lignieresii* d) *Arcanobacterium pyogens*

408. Satellitism is shown by
a) *S.aureus* and *Haemophilus* b) *S.aureus* and *Moraxella*
c) *Streptococcus bovis* and *Haemophilus* d) *Streptococus equi* and *pseudomonas*

409. Bipolar staining character is exhibited by
a) *Pasteurella multocida* b) *Yersinia pestis*
c) *Burkholderia pseudomallei* d) All the above

410. A semisolid media used for isolation of *Leptospira*
a) Cox medium b) Stuart's
c) Thiol medium d) Fletcher's medium

411. Herd test used for the diagnosis of brucellosis
a) RBPT b) CFT
c) ABRT d) STAT

412. Cork screw motility is characteristic of
a) *Campylobacter* b) *Leptospira*
c) *Proteus* d) *Listeria*

413. Enzootic abortion in ewes is caused by
a) *Chlamydophila psittaci* b) *Chlamydophila abortus*
c) *Brucella abortus* d) *Chlamydia trachomatis*

414. Eijkman's test is positive for
a) *E. coli* b) *Salmonella typhimurium*
c) *Salmonella pullorum* d) *Klebsiella pneumoniae*

415. *Proteus* and *Salmonella* are differentiated by
a) Catalase test
b) Urease test
c) Oxidase test
d) Citrate test

416. One dimorphic fungus
a) *Sporothrix schenckii*
b) *Microsporum canis*
c) *Trichophyton verrucosum*
d) *Candida albicans*

417. Germ tube test is done for the identification of
a) *Candida tropicalis*
b) *Candida pseudotropicalis*
c) *Candida albicans*
d) *Candida krusei*

418. Brooder pneumonia is caused by
a) *Histoplasma capsulatum*
b) *Coccidioides immitis*
c) *Blastomyces dermatitidis*
d) *Aspergillus fumigatus*

419. *Fusobacterium necrophorum* is an example for
a) Aerobic spore former
b) Anaerobic spore former
c) Anaerobic nonspore former
d) Microaerophilic spore former

420. Canine granulocytic ehrlichiosis is caused by
a) *Ehrlichia canis*
b) *Ehrlichia ovina*
c) *Ehrlichia ewingii*
d) *Ehrlichia ruminatium*

421. The number of serotypes of Foot and Mouth Disease virus
a) 5
b) 6
c) 7
d) 8

422. The diagnostic test used for rabies is
a) Fluorescent antibody technique
b) RREID
c) RT - PCR
d) All of these

423. The route of inoculation of embryonated chicken eggs for isolation of bluetongue virus
a) Yolk sac
b) Allantoic
c) CAM
d) Amniotic

424. Highly pathogenic avian influenza (HPAI) should have haemagglutinin type
a) H1
b) H5
c) H3
d) H2

425. Which among the following is a velogenic Newcastle Disease virus
a) Lasota
b) R_2B
c) Milano
d) Komorov

426. Virulent viscerotropic Newcastle Disease is also called as
a) Asiatic form
b) Beache's form
c) Beaudette's form
d) Hitchner's form

427. Infectious bovine rhinotracheitis is caused by
a) Bovine herpes virus 1
b) Bovine herpes virus 2
c) Bovine herpes virus 5
d) None of these

428. Basophilic inclusion bodies in hepatocytes, Kupffer cells and endothelial cells are seen in
a) Rabies
b) Infectious canine hepatitis
c) Canine distemper
d) None of these

429. Button ulcers, turkey egg kidney and strawberry lymph nodes are lesions observed in
a) Hog cholera
b) Swine vesicular disease
c) Vesicular stomatitis
d) None of these

430. The virus associated with winter dysentry in cattle is
a) Bovine herpes virus
b) Bovine corona virus
c) Bovine papilloma virus
d) None of these

431. Transmissible gastroenteritis virus is related antigenically to
a) Feline corona virus
b) Canine parvo virus
c) Classical swine fever virus
d) Bovine viral diarrhea virus

432. The virus family which has got segmented genome
a) Picornaviridae
b) Arenaviridae
c) Coronaviridae
d) Parvoviridae

433. The post inoculation incubation temperature of embryonated chicken eggs is usually
a) 38°C
b) 39°C
c) 33- 37°C
d) 30 – 33°C

434. The number of genome segments in Orbivirus is
a) 9
b) 10
c) 11
d) 12

435. The type of tissue culture in which cells are grown as monolayer on the surface of small solid particles
a) Micro culture
b) Suspension culture
c) Micro carrier culture
d) None of these

436. Marek's Disease commonly affects birds of the age group
a) 1-2weeks
b) 12-24 weeks
c) 12-24 days
d) 48 – 52 weeks

437. The age at which birds are most susceptible to infectious bursal disease virus
a) 1-14days
b) 3-6 weeks
c) 3-6 months
d) 24-48 weeks

438. Which among the following is not a prion disease?
a) Aujesky's disease
b) Bovine spongiform encephalopathy
c) Kuru
d) Transmissible mink encephalopathy

439. Cherry red discoloration of inoculated chicken embryos is produced by
a) New Castle disease virus
b) Blue tongue virus
c) Infectious bronchitis virus
d) Infectious bursal disease irus

440. The principal vector of African Horse Sickness virus is
a) Mosquitoes
b) *Culicoides* spp.
c) House fly
d) Not vector borne

441. BPL, AEI and EEI are examples of
a) Detergents
b) Nucleic acid denaturing agents
c) Alcohols
d) Oxidizing agents

442. The Imperial Bacteriological Laboratory was established in Pune in
a) 1888
b) 1889
c) 1898
d) 1899

443. Pock assay and plaque assay are examples of
a) Quantal assys
b) Quantitiative assays
c) Semiquantitative assays
d) None of these

444. The age of the embryo for inoculation by the intravenous route is
a) 10 days
b) 13 days
c) 15 days
d) 16 days

445. Replication of Pappilloma virus in restricted to
a) Nerve cells
b) Epithelial cells
c) Reticulo endothelial cells
d) None of the above

446. The protein which is located to the inside of the capsid of FMD virus is
a) VP1
b) VP2
c) VP3
d) VP4

447. Which of the influenza virus multiplies in the intestinal cells
a) Swine Influenza virus
b) Equine Influenza virus
c) Avian influenza virus
d) None of the above

448. FMD virus is stable at pH
a) 5
b) 8
c) 7
d) 10

449. Preservative used for the transportation of Rinder pest virus specimens
a) 50% Glycerol saline
b) Normal saline
c) Phosphate Buffered Saline
d) None of the above

450. Virus isolation in Chicken Embryo was introduced by
a) Good Pasteur
b) Wood Pasteur
c) Metchnikoff
d) Louis Pasteur

451. The effectiveness of UV light & its wave length are
a) Directly propotional
b) Inversely proportional
c) Having no relation
d) Directly / inversely proportional

452. Infra- red radiation is a method of
a) Dry heat sterilization
b) Ionizing sterilization
c) Light sterilization
d) None of the above

453. Phenol coefficient is an index of evaluation of
a) Chemical
b) Intelligence
c) Disinfectant
d) Compounds

454. Silver nitrate is
a) An Antiseptic
b) A disinfectant
c) Antifungal agent
d) Anti inflammatory agent

455. Seitz filter is
a) An earthen ware filter
b) Glass filter
c) Asbestos filter
d) Cellulose Membrane filter

456. Pleomorphic form of spheroplast is a charecteristic of
a) Gram +ve bacteria
b) Gram -ve bacteria
c) All bacteria
d) Intracellular bacteria

457. In association of bacteria commensalism is
a) Both organism will be benefited
b) One organism will be benefited other not harmed
c) One organism will be benefited other will be harmed
d) Both organism will be unaffected

458. New Castle disease virus of poultry belongs to the genus
a) Avula
b) Rubula
c) Paramyxo
d) Orthomyxo

459. In growth phases of bacteria lag phase is
a) Initial stationary phase
b) Exponential phase
c) Phase of positive growth acceleration
d) Phase of accelerated death

460. For bacterial growth, light is
a) Favourable
b) Unfavourable
c) Having no influence
d) Some times favourable & some times unfavourable

461. Sudden transfer of a bacteria from a concentrated to a weak solution cause
a) Plasmolysis
b) Plasmoptysis
c) Plasmodialysis
d) Cellulites

462. For nitrogen source in media, hydrolysis of large colloidal protein molecules in culture media broken up in to
a) Proteoses
b) Peptones
c) Peptides
d) All the above

463. Gelatin is a protein prepared by hydrolysis of which material with boiling water
a) Elastin
b) Collagen
c) Albumen
d) Globulin

464. Standard proportion of serum in serum agar
a) 5%
b) 10%
c) 15%
d) 20%

465. Vectors used for cloning large fragments of eukaryotic DNA are
a) Bacteriophages
b) Cosmids
c) Lambda- phages
d) Plasmids

466. Optimum pH of the media used for cultivation of yeast is
a) 5.8- 6.2
b) 7.4- 7.8
c) 9.5- 9.8
d) 3.5- 3.8

467. All strict anaerobes lack one of the following
a) Respiratory enzymes
b) Myeloperoxidase
c) Superoxide dismutase
d) Gelatinase

468. Cell wall of Gram negative bacteria does not contain
a) LPS
b) Teichoic acid
c) Peptidoglycan
d) Outer membrane

469. One enrichment medium used in bacteriology is
a) Blood agar
b) Mac Conkey agar
c) Tetrathionate broth
d) Thioglycollate broth

470. In Mac Fadyean staining, methylene blue is ripened by adding
a) Sodium carbonate
b) Potassium carbonate
c) Sodium bicarbonate
d) Potassium hydroxide

471. Dermatomycosis is produced by the following except
a) Trichophyton
b) Microsporum
c) Blastomyces
d) Epidermophyton

472. Weak calf syndrome in calves is caused by
a) Bovine entero virus
b) Bovine adeno virus type -7
c) Bovine Virus diarrhoea virus
d) Bovine Herpes virus-1

473. The following antibiotics act on bacteria, inhibiting protein synthesis, except
a) Penicillin
b) Gentamicin
c) Tetracycline
d) Chloramphenicol

474. Feulgen stain imparts
a) Deep violet colour to RNA
b) Deep violet colour to DNA
c) Cherry red colour to DNA
d) Cherry red colour to RNA

475. The following organisms are motile with flagella except
a) *Bacillus cereus*
b) *Escherichia coli*
c) *Leptospira*
d) *Proteus vulgaris*

476. For direct microscopical examination, suspected fungal specimens are usually stained with
a) Leishman's stain
b) Gram's stain
c) Acid fast stain
d) Lactophenol cotton blue

477. Adaptive enzymes are produced
a) When there is a need for it
b) Irrespective of whether the substrate on which it acts exists or not
c) When optimum temperature is given
d) When optimum pH is given

478. Type of Hypersensitivity of cell mediated nature
a) Type I
b) Type II
c) Type III
d) Type IV

479. Short thermal test is a modified
a) Mancini test
b) Oudin test
c) Tuberculin test
d) Oaklay Fulthrope test

480. Milk allergy is found usually in which breed of cattle
a) Jersy
b) Holstein Friesien
c) Brown Swiss
d) None of the above

481. Hemolytic Disease of Newborne is which class of Hypersensitivity
a) Type I
b) Type II
c) Type III
d) Type IV

482. Autoimmunity is mediated by
a) B cells
b) T cells
c) Either B or T cells
d) Neither B nor T cells

483. Microchimerism is related with
a) Dwarfness
b) Auto immunity
c) Hemolytic disease of New borne
d) Vaccination failure

484. In Addison's disease, the self antigen is
a) Thyroid protein
b) RBC membrane protein
c) Acetyl choline receptors
d) Adrenal cells

485. Grafts transplanted between two genetically identical individuals
a) Autograft
b) Isograft
c) Allograft
d) Xenograft

486. In organ graft rejection acute rejection of allografts are characterized by rejection
a) With in 48 hrs of transplantation
b) With in 7days of transplantation
c) After 7 days of transplantation
d) Several months after grafting

487. During allograft rejection blood group antigens trigger
a) Ab formation
b) T-Cell mediated rejection response
c) Both together
d) None of the above

488. An example for Type III hyper sensitivity
a) Tuberculin reaction
b) Milk allergy
c) Arthus reaction
d) Molecular mimicry

489. In precipitation tests which type of antigens are detected
a) Soluble antigens
b) Particulate antigens
c) Self antigens
d) Micro antigens

490. One of the following is a primary binding test
a) Precipitation test
b) Agglutination test
c) ELISA
d) Complement Fixation test

491. Colour reaction is a negative test in
a) Hemagglutination test
b) Hemagglutination Inhibition test
c) ELISA
d) Complement Fixation test

492. The antigen specific cells of the immune system are
a) Lymphocytes
b) Neutrophils
c) Macrophages
d) NK cells

493. Bence Jone's proteins are
a) Heavy chains of immunoglobulins
b) Plasma proteins
c) Light chains of immunoglobulins
d) IgE

494. Fresh guinea pig serum is used as a source of complement because
a) It is easily available
b) It is heat stable
c) It is non haemolytic
d) It contains all the complement components in the right proportion

495. Premunity is a term used in connection with immunity to
a) Virus
b) Protozoa
c) Helminths
d) Bacteria

496. Anthrax spore vaccine is prepared from a
a) Non capsulated toxigenic strain
b) Capsulated toxigenic strain
c) Capsulated non toxigenic strain
d) Non capsulated non toxigenic strain

497. Anamnestic response is a property specially exhibited by
a) Plasma cells
b) Immune lymphocytes
c) Memory cells
d) Virgin lymphocytes

498. Haptens have
a) Immunogenicity and reactivity
b) Reactivity but no immunogenicity
c) Immunogenicity but no reactivity
d) Neither immunogenicity nor reactivity

499. Horse shoe or ring scab is pathognomonic for
a) Cow pox
b) Psuedo cow pox
c) Sheep pox
d) orf

500. The following are inactivated vaccines except
a) Anthrax spore vaccine
b) Salk vaccine for poliomyelitis
c) Semple's vaccine for rabies
d) Tetanus toxoid

501. The secretion/ excretion from the body which lacks immunoglobulin
a) Bile
b) Urine
c) Saliva
d) Milk

502. A quantitative precipitation test is
a) Ouchterlony test
b) Oakley Fulthorpe test
c) Oudin test
d) Mancini's test

503. During secondary response, T-independent antigen continues to produce
a) IgA
b) IgM
c) IgG
d) IgD

504. The immunogenicity of proteins is increased by the incorporation of
a) Sulphur containing aminoacids
b) Cyclic aminoacids
c) Aromatic aminoacids
d) Essential aminoacids

505. The end cell formed from B-lymphocytes after antigenic stimulation is
a) Lymphoblast
b) Cytotoxic cells
c) Suppressor cells
d) Plasma cells

506. The common site of bleeding of mouse is
a) Tail vein
b) Orbital socket
c) Ear vein
d) Heart

507. Bacteria which are oxidase negative, motile,lactose fermenting with MUG test positive
a) *Salmonella*
b) *E. coli*
c) *Shigella*
d) *Klebsiella*

508. Which of the following is a haemagglutinating bacteria
a) *Bordetella bronchiseptica*
b) *Pasteurella multocida*
c) *Mycobacterium bovis*
d) *Hemophilus parasuis*

509. Which of the following organisms cannot be detected by plate agglutination test
a) *Mycoplasma*
b) *Leptospira*
c) *Mycobacteria*
d) *Brucella*

510. Which is the diagnostic test recommended to differentiate the infected animals from the vaccinated ones against brucellosis
a) ELISA
b) ABRT
c) CFT
d) STAT

511. Which is the current vaccine against Brucellosis which can differentiate vaccinated animals from the infected one?
a) Strain 19 vaccine
b) RB51
c) Rev-1
d) None of the above

512. Vole Bacillus is a synonym for
a) *Mycobacterim microti*
b) Mycobacterium murium
c) Mycobacterium fortuitum
d) Mycobacterium avium

513. Dick test in man is a measure of immunity to scarlet fever
a) Erythrogenic toxin
b) Lethal toxin
c) Fibrinolysin
d) Streptolysin-S

514. Quellung reaction is
a) Motility test
b) Bile solubility test
c) Capsule swelling test
d) Optochin test

515. Rolling disease in mice is due to the toxin produced by which bacteria
a) Clostridium botulinum
b) Clostridium neurolyticum
c) Hemophilus
d) Listeria monocytogenes

516. The toxin which is not produced by *E.coli* is
a) Vero Toxin
b) LT
c) ST
d) TSST

517. Dermonecrotic toxin is produced by which serotype of *Pasteurella multocida*
a) A:1
b) D:1
c) B:2
d) F:3

518. Which of the following is a carbohydrate fermenter bacteria
a) Pseudomonas
b) Campylobacter
c) Bordetella
d) Pasteurella

519. Which of the following organism causes Early Embryonic death in pregnant females
a) *C.fetus* ssp *fetus*
b) *C.fetus* ssp *veneralis*
c) Brucella abortus
d) None of the above

520. The campylobacter species which will not grow in presence of 1% Glycine is
a) Campylobacter coli
b) *C.fetus* ssp *fetus*
c) *C.fetus* ssp *veneralis*
d) *C.jejuni* ssp *jejuni*

521. The number of biotypes for *Brucella abortus*
a) 6
b) 7
c) 9
d) 8

522. Primary cultures of *Brucella abortus* suspected samples should be incubated in an atmospheric of 10% CO2 for at least
a) 3 days
b) 5 days
c) 14 days
d) 10 days

523. The member of Genus Streptococcus which will grow on Mac Conkey agar
a) Streptococcus uberis *b) Enterococcus fecalis*
c) None of the above d) All of the above

524. The number of enterotoxins produced by *Staphylococcus aureus*
a) 9 b) 5
c) 6 d) 7

525. The type species of genus *Salmonella* is
a) Salmonella choleraesuis b) Salmonella enterica
c) Salmonella bongori d) Salmonella typhi

526. The *Actinobacills* specis which will not grow in Mac Conkey is
a) A.ligneiresi *b) A.pleuropnuemoniae*
c) A.equuli *d) A.suis*

527. Optimum growth temperature range for cultivation *Leptospira* is
a) 25-27°C b) 28-30 °C
c) 36-38 °C d) 40-42 °C

528. The source of Carbon in the metabolism of *Leptospira* organisms is
a) Carbohydrates b) Proteins
c) Fatty acids d) None of the above

529. Which species is refractory to Glanders infection
a) Equines b) Dogs
c) Goats d) Cattle

530. In Modified ZN staining, the decolourizer used is
a) 0.5 % acetic acid for 15 minutes b) 0.05% acetic acid for 15 seconds
c) 0. 5 % ethanol 15 minutes d) 0.5% acetic acid for 15 seconds

531. Which of the following genes in retro virus code for reverse transcriptase
a) *V- onc* b) G*ag*
c) P*ol* d) E*nv*

532. Nucleic acid of astrovirus has the following characteristics except
a) Single stranded b) Positive sense
c) Segmented d) 6-8 Kb in size

533. Predilection site for Parvovirus
a) Bone marrow b) Enteric epithelium
c) Fetus d) All the above

534. Specimen of choice for virus isolation/ antigen detection in canine parvo virus infection
a) Blood during the viraemic phase b) Fecal material
c) Lymph node and spleen d) All the above

535. Continuous cell line of human origin used in the production of Rabies vaccine
a) BHK-21 b) Hela
c) PK-15 d) MDBK

536. Which is the most sensitive diagnostic test for Rabies
a) ELISA b) FAT
c) RT- PCR d) Negri body detection

537. Neonatal calf diarrhea is caused by
a) Rota virus b) Parvo virus
c) Corona virus d) Salmonella

538. Number of RNA segments in Rota viruses
a) 9 b) 10
c) 11 d) 12

KEY ANSWERS

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
d	d	d	c	b	c	a	b	c	c	a	c	b	b	d
16	17	18	19	20	21	22	23	24	25	26	27	28	29	30
a	b	b	b	c	a	a	d	a	d	d	a	b	b	d
31	32	33	34	35	36	37	38	39	40	41	42	43	44	45
b	a	a	d	a	d	a	c	b	a	c	a	b	a	d
46	47	48	49	50	51	52	53	54	55	56	57	58	59	60
a	a	a	c	d	c	d	a	a	c	a	a	a	a	d
61	62	63	64	65	66	67	68	69	70	71	72	73	74	75
d	d	c	b	a	c	a	a	c	a	c	d	a	c	b
76	77	78	79	80	81	82	83	84	85	86	87	88	89	90
d	c	a	b	b	c	a	b	a	a	b	d	b	d	b
91	92	93	94	95	96	97	98	99	100	101	102	103	104	105
a	a	c	a	b	d	d	a	d	d	d	c	d	d	d
106	107	108	109	110	111	112	113	114	115	116	117	118	119	120
d	a	a	d	c	c	a	a	d	a	d	d	c	c	c
121	122	123	124	125	126	127	128	129	130	131	132	133	134	135
b	c	b	c	c	b	a	b	a	a	b	d	d	a	b
136	137	138	139	140	141	142	143	144	145	146	147	148	149	150
d	a	c	b	d	c	c	a	b	a	c	c	b	c	a
151	152	153	154	155	156	157	158	159	160	161	162	163	164	165
b	c	b	b	b	d	d	c	c	a	c	b	c	b	a
166	167	168	169	170	171	172	173	174	175	176	177	178	179	180
d	a	d	c	d	b	a	b	c	b	b	c	c	d	c
181	182	183	184	185	186	187	188	189	190	191	192	193	194	195
a	b	a	c	a	d	c	c	c	c	d	b	c	a	a
196	197	198	199	200	201	202	203	204	205	206	207	208	209	210
d	a	a	b	a	b	d	c	a	b	c	d	d	c	d

211	212	213	214	215	216	217	218	219	220	221	222	223	224	225
b	c	a	c	a	c	b	d	c	a	c	d	b	c	a
226	227	228	229	230	231	232	233	234	235	236	237	238	239	240
c	d	a	b	d	c	d	a	b	d	c	b	a	d	c
241	242	243	244	245	246	247	248	249	250	251	252	253	254	255
b	a	d	c	d	b	a	d	b	c	a	d	b	b	a
256	257	258	259	260	261	262	263	264	265	266	267	268	269	270
c	b	c	d	c	c	c	b	a	a	b	c	d	c	d
271	272	273	274	275	276	277	278	279	280	281	282	283	284	285
a	d	a	b	b	c	b	d	a	b	b	c	a	d	a
286	287	288	289	290	291	292	293	294	295	296	297	298	299	300
c	b	b	d	c	b	d	b	a	a	a	a	c	a	d
301	302	303	304	305	306	307	308	309	310	311	312	313	314	315
b	c	b	a	c	b	a	a	b	c	c	c	c	b	b
316	317	318	319	320	321	322	323	324	325	326	327	328	329	330
c	b	b	c	b	d	b	c	a	b	a	b	c	b	b
331	332	333	334	335	336	337	338	339	340	341	342	343	344	345
c	c	c	a	b	a	c	a	a	d	a	b	a	a	b
346	347	348	349	350	351	352	353	354	355	356	357	358	359	360
d	c	b	a	c	b	c	d	a	b	b	d	a	d	a
361	362	363	364	365	366	367	368	369	370	371	372	373	374	375
a	c	d	a	a	c	b	a	d	a	c	a	c	b	b
376	377	378	379	380	381	382	383	384	385	386	387	388	389	390
c	c	c	d	b	a	a	b	b	a	b	b	b	b	b
391	392	393	394	395	396	397	398	399	400	401	402	403	404	405
a	d	c	a	b	b	c	d	a	b	b	b	a	c	b
406	407	408	409	410	411	412	413	414	415	416	417	418	419	420
a	c	a	d	d	c	a	b	a	b	a	c	d	c	b
421	422	423	424	425	426	427	428	429	430	431	432	433	434	435
c	d	a	b	c	a	a	b	a	b	a	b	c	b	c
436	437	438	439	440	441	442	443	444	445	446	447	448	449	450
b	b	a	b	b	b	b	b	c	b	d	c	c	c	a
451	452	453	454	455	456	457	458	459	460	461	462	463	464	465
b	a	c	a	c	b	b	a	a	b	b	d	b	b	b
466	467	468	469	470	471	472	473	474	475	476	477	478	479	480
a	c	b	c	a	c	c	a	b	c	d	a	d	c	a
481	482	483	484	485	486	487	488	489	490	491	492	493	494	495
b	c	b	d	b	c	a	c	a	c	d	a	c	d	b
496	497	498	499	500	501	502	503	504	505	506	507	508	509	510
a	c	b	b	a	b	d	b	c	d	b	b	a	c	c
511	512	513	514	515	516	517	518	519	520	521	522	523	524	525
b	b	a	c	b	d	b	d	b	c	b	d	b	c	b
526	527	528	529	530	531	532	533	534	535	536	537	538		
b	b	c	d	d	c	c	d	d	b	c	a	c		

II. Fill up the blanks:

1. The resolution power of a microscope can be improved by ..... the wavelength of light.
2. UV light is most effective as bactericidal at ..... nanometers.
3. Bacteria which grow in high salt concentration are called .....
4. Bacteria are classified under Kingdom .....
5. Cotton wool plug technique was first used by the scientists ..... to keep the media sterile.
6. Special type of media used for growing anaerobic bacteria are called.....
7. Drug resistance in bacteria is transmitted through .....
8. The partial removal of micro organism is called as .....
9. A complete fully developed virus particle is called as .....
10. The discontinuous strand of newly formed bases in a lagging strand during replication is called as .....
11. Hinge region is rich in ..... amino acid.
12. Haemagglutination test was first discovered by ..... in 1941.
13. ..... antibodies are alled local antibodies.
14. Long hinge region is characteristic of ..... immunoglobulin.
15. Programmed cell death is called .....
16. The basis of cellular immunity was put forth by .....
17. AGID requires a ..... antigen.
18. The study of reaction between antigen and antibody is called .....
19. Antigens migrate towards..... in an electric field.
20. The ability of a substance to react with the specific antibodies or activated T cells that it includes it called .....
21. Rhinosporidiosis is a chronic infection of the mucous membrane of the nasal cavity caused by .....
22. Ulcer like patches in crop due to *Candida albicans* are known as .....
23. Strawberry foot rot in ovine is caused by .....
24. Selective medium for the cultivation of *Streptococcus agalactiae* is .....
25. Exotoxin, tetanospasmin is produced by .....
26. Corynebacteria are gram positive, small pleomorphic rods with ..... arrangements.
27. ..... causes erysipeloid in human.
28. Infectious coryza is caused by .....
29. Mycoplasma belong to the class .....
30. The basic taxon of the genus leptospira is .....
31. Morbilli viruses differ from other Paramyxoviruses by the absence of ..... activity.
32. Sheep pox, Goat pox and Lumpy skin disease are collectively known as ..... pox.
33. Chicken possessing histocompatability antigen B^{21} is linked to resistance to ..... disease.
34. The strain of adeno virus causing ..... is first reported in 1976 in broiler breeder parents.
35. Human exposed to Newcastle disease virus may develop .....
36. Infectious bursal disease is also known as .....
37. Pox viruses have ..... symmetry.
38. Avian encephalomyelitis is also known as .....
39. Duck viral hepatitis produces lesions on .....

40. The stick and feather follicle methods have used for vaccinating fowls against .....
41. The organ for adhersion in bacteria is .....
42. Acid fastness in Mycobacterium species is due to .....
43. Dense cell wall is present in Gram ..... bacteria.
44. The first classification of bacteria was put forth by .....
45. Anaerobic bacteria have ..... enzyme to detoxify the respiratory metabolites.
46. The dye used in fluorescent microscopy is.....
47. The morphological subunits of capside are .....
48. The type of nutrition used by fungi is .....
49. Pityrosporum ovale is otherwise called as .....
50. Smallest of the animal virus is .....
51. Protection against intracellular bacteria is provided by ..... immunity.
52. The process of phagocytosis was discovered by .....
53. Circulating macrophages are called .....
54. Clonal selection theory of antibody formation was proposed by .....
55. Anamnestic response is due to the presence of ..... cells.
56. The term vaccine was coined by the scientist .....
57. High endothelial venules are rich in ..... cells.
58. Antigen and antibody react at the ..... sites of their respective molecules.
59. MHC of bovines are called as .....
60. Listeria requires ..... enrichment for isolation.
61. Q fever is caused by .....
62. Wooden tongue is caused by .....
63. In weil-felix reaction antigens from ..... bacilli are used as antigen.
64. ..... medium is selective medium for streptococci.
65. Salmon poisoning on dogs is caused by .....
66. Chinese letter appearance is characteristic of .....
67. Glasser's disease in pigs is caused by .....
68. Pink eye in cattle is caused by .....
69. Summer mastitis is caused by .....
70. Goat plague is caused by .....
71. Hog cholera virus is antigenically related to .....
72. Chicken anaemia virus belongs to the genus .....
73. Pump handle respiration is seen in .....
74. All viral genomes are haploid except .....
75. Pulmonary form of African horse sickness is termed as .....
76. COFAL test is used in the diagnosis of .....
77. Reverse transcriptase enzyme is present in the viruses belonging to the family .....
78. In IBD, the selective replication of virus occurs in the .....
79. Changing objectives without major focusing adjustment in microscope is called as .....
80. Bayer junctions seen in ..... bacteria.
81. The capsule of Bacillus anthracis is made up of .....
82. Two orders in virus classification are .....
83. ..... is a DNA virus having reverse transcriptase.
84. ..... is a capsulated yeast.
85. Roth's flag technique is useful for .....

86. The phenomenon of adherence of erythrocytes with virus is called .....
87. A measure of infectious ability of a pathogen is known as .....
88. Molecules that coat foreign particles and promote phagocyotis are called .....
89. MHC 1 molecules are present in all ..... cells.
90. There are ..... numbers of constant and ..... numbers of variable domain in a single epsilon heavy chain.
91. Null cells are ..... and ..... cells.
92. The hyper variable regions on the variable chain of immunoglobulin is called as .....
93. The recognition site of epitope in T-cell is termed as .....
94. The eventual product of complement system, which lyses the microbes, is .....
95. The two important structures of cells that differentiate microbes into algae, bacteria and fungi are .....
96. The glycocalyx substance, that is firmly attached to the bacterial cell wall is called .....
97. The extrachromosomal DNA of bacteria is referred as .....
98. The energy molecule of bacteria is .....
99. Bacteria that utilize light as energy source are referred as .....
100. In respiration, ... numbers of ATP molecules are produced.
101. The fragments of DNA in lagging strand are referred as .....
102. The antibiotic penicillin inhibits the synthesis of ..... of bacteria.
103. The light source in fluorescent microscope is .....
104. The system of viral classification based on the relationship between genome and mRNA is called .....
105. The first animal virus to be identified was .....
106. Acid fast character is due to the presence of ..... acid.
107. The viral proteins that are formed during late translation are ..... proteins of virus.
108. The enveloped viruses are sensitive to .....
109. ..... is called as father of mycology.
110. The motile sporangiospores are called .....
111. The non-septate hypha is called as ..... hypha.
112. Transduction in bacteria is mediated by .....
113. The important cell of specific immune response is .....
114. Bursa of Fabricius in birds is ..... lymphoid organ.
115. IgE is also known as ..... antibody.
116. Clonal selection theory was proposed by .....
117. Flexibility of antibody molecule is due to ..... region.
118. Toxoids are produced by treating ..... with protein denaturing agents.
119. The gene that protects memory cells from apoptosis is .....
120. Eosinophils utilize ..... ions for phagocytosis.
121. The credit for the invention of compound microscope goes to .....
122. The spirochetes can be viewed under ..... microscope.
123. Two important differential staining techniques followed in bacteriology are .....
124. Spores contain ..... acid.
125. Largest of DNA viruses fall in ..... family.
126. The smallest animal virus is .....
127. Variolation is an early method of protection against .....disease.
128. Non-toxin derivative of toxin used as a vaccine is called as .....
129. The ability of the immunological assay to detect only the target and not any other is referred to as ..... of the test.
130. The interdigitating dendritic cells found on the brain are called .....

131. Soluble BcRs are called as .....
132. The first vaccine was developed by .....
133. The initial responsive defense mechanism temporarily enhances local defense through .....
134. Antibodies are ..... in their composition.
135. The richest source of complement is the serum of ..... animal.
136. The portion of immunoglobulin molecule responsible for recognizing antigenic structures is .....
137. ..... are extra chromosomal elements in bacterial cells involved in bacterial resistance.
138. ..... is a medium specific for fungi.
139. Bacteria have primitive nuclear apparatus and hence they are called .....
140. ..... are structures in the bacterial cells involved in conjugation.
141. ..... is an important anaerobic spore forming bacterial of veterinary importance.
142. Since the spores of ..... are highly resistant to environmental degradation, terrorists might use them as biological weapons.
143. The unique feature of viruses is they contain only ..... type of nucleic acid.
144. The antibiotic ..... interferes with the cell wall synthesis of bacteria and hence ineffective against Mycoplasma.
145. The ..... of the disinfectant is one of the most important factor in determining its efficacy.
146. Heat sensitive plasticwares used in laboratory work can be sterilized by the use of .....
147. ..... is the scientist credited with the discovery of blood groups.
148. ..... is the most important molecule in humoral immunity.
149. Parts of an antigen involved in the binding of antibodies are called .....
150. ..... are small molecules which when coupled with large proteins act as antigens.
151. ..... is the subclass of immunoglobulin important in mucosal surfaces or mucosal immunity.
152. ..... samples are required for serological tests to establish the cause for the disease.
153. ..... cells are the most important cells in cell mediated immunity.
154. ..... in mammals contains large amounts of antibodies and can confer passive immunity.
155. ..... in serum move in an electrophoretic field by electroendosmosis.
156. ..... is the serological test of choice in estimating the levels of antibodies to haemagglutinating viruses.
157. Many bacteria move by hair like structure called .....
158. Sterilization temperature in hot air oven is..... .
159. Sexual spores of several members of the class ascomycetes are called .....
160. Some fungi are yeast like in the parasitic state and filamentous like in saprophytic state. This feature is known as .....
161. At the end of replication enveloped viruses get released by ..... and non enveloped viruses get released by.....
162. Viruses that attack bacteria are known as .....
163. The unit of measurement of length of virus is known as ..... and for bacteria is .....

164. ..... is the substance, when given with an antigen, enhances the immune response.
165. ..... region is the antigen binding sites on immunoglobulin.
166. Phagocytosis can be divided into 4 discrete stages: .....
167. ..... is the immunoglobulin found in highest concentration in blood.
168. Local inflammation due to Type III hypersensitivity reaction is called as .....
169. Programmed cell death is otherwise known as .....
170. ..... is the enzyme commonly used to conjugate antibodies in ELISA.
171. The highly resistant resting stage of bacteria is called as .....
172. Some species of bacteria exhibit great variation in the shape and size of individual cells. This is termed as .....
173. The interval of time between two bacterial cell divisions is known as .....
174. Viruses have no ..... activity of their own.
175. The viral capsid is composed of morphological units called .....
176. The dense closely-knit mat or mesh of hyphae is known as .....
177. Compared to bacteria, fungi prefer more ..... pH.
178. Immunoglobulin possesses ..... types of light chains.
179. ..... immunity provides protection against intracellular pathogens.
180. ..... are the important secondary lymphoid organs.
181. The immunoglobulin class present in secretion is .....
182. Anamnestic response is due to the presence of ..... cells.
183. Cross infection occurring in hospitals are called ..... infections.
184. ..... cells are the tissue macrophages present in liver.
185. Bordetella bronchiseptica causes atropic rhinitis in pigs in combination with .....
186. Localisation of Brucella organisms in reproductive organs of animals is associated with the presence of .....
187. Epsilon prototoxin is activated by .....
188. Selective media for leptospira is .....
189. *Haemophilus* grow as satellite colonies near the streak of *Staphylococcus aureus* because of .....
190. Protein A is present as surface protein on .....
191. Dye inhibition test is used for differentiation of .....
192. Anton test is used to identify .....
193. Iron acquisition of Mycobacterium tuberculosis is related to ..... of cell wall component.
194. Example for Gram positive, aerobic, spore forming non motile rod .....
195. Example for haemagglutinating poultry virus .....
196. Parvo virus replicate selectively in .....cells.
197. Only DNA virus that can be transmitted by soft ticks (arbovirus) .....
198. Rabies virus attaches through ..... receptors of neuromuscular junctions of peripheral nerve fibres.
199. Important test used for detection of rabies viral antibodies .....
200. Antigenic drift and swift in influenza virus is due to .....
201. ..... protein of para myxo virus is responsible for giant cell formation and play key role in pathogenesis.
202. Name the morbilli virus which is of zoonotic importance .....
203. Infectious bronchitis virus causes haemagglutination after treatment with ..... (enzyme).

204. Name the inactivating agent commonly used preparation of foot and mouth disease vaccine .....
205. Name the virus transmitted through artificial insemination .....
206. Bluetongue virus is antigenically related to .....
207. Markes disease virus is antigenically related to ..... virus.
208. The members of the family retroviridae contain ..... enzyme.
209. Test used for serotyping of Foot and Mouth disease virus .....
210. The preferred route of inoculation for isolation of bluetongue virus is .....
211. Name the test used for detection Newcastle disease virus antibodies in birds .....
212. Cell free virus of Marek's disease can be obtained from .....of infected birds.
213. Black quarter is caused by .....
214. Ascolis test is done to diagnose .....
215. The three components of anthrax toxin are .....
216. Swarming on agar plates is produced by .....
217. Chronic respiratory disase in poultry is caused by .....
218. *Candida allbicans* forms ..... when cultivated on cornmeal agar.
219. PPR is otherwise known as .....
220. ..... viruses are antigenically related to measles virus.
221. In Rabies virus intracytoplasmic acidophilic inclusion are known as .....
222. ..... enzyme is used for the replication of Retro group of virus.
223. ..... bodies are noticed in Fowl Pox.
224. The zebra markings in large intestine of affected animals are noticed in ..... disease.
225. Bisegmented RNA virus is present in ..... family.
226. Duck viral enteritis is otherwise called as .....
227. ..... are responsible for transmission of blue tongue virus disease in sheep.
228. The substance that is present in bovine placenta which stimulate the growth of Brucella is .....
229. All pathogenic Clostridia are motile except .....
230. Among the mycoplasma, which do not require Sterol for growth belonged to ..... family.
231. A Gram-negative non sporing obligate anaerobe is .....
232. Korthof's medium is used for the isolation of .....
233. Common name of bacillus of blue-green pus is .....
234. Bubonic plague in human being is caused by .....
235. Malta fever is caused by ..... organism.
236. The incidence of food poison caused by ..... bacteria in mass feeding ceremonies.
237. Equine infectious anemia caused by .....
238. Equine infectious anemia is diagnosed by ..... Test.
239. Infectious bursal disease is grouped under ..... family.
240. Avian oncovirus possess ..... enzyme.
241. Morphology of rabies virus is described as .....
242. Pest-des-pestis ruminants virus is related to .....
243. Hard pad disease is also called as .....
244. Duck viral hepatitis is caused by .....
245. Rota virus infects ..... cells of the intestine.
246. Haemophilus require ..... factors for growth.
247. Diamond skin disease of pigs is caused by .....
248. Avirulent stain of Bruceslla used in vaccine production is .....

249. Pathogenic staphylococci are ..... positive.
250. ..... stain is used to demonstrate the colony of mycoplasma.
251. ..... is an organism positive for CAMP test.
252. Tick borne fever in dogs is caused by .....
253. ..... is the site of action of enterotoxin produced by staphylococcus.
254. Hard pad disease in canines is caused by ..... virus.
255. The virus commonly used for vaccinating chicks against Marek's disease is.....
256. Rabies virus can agglutinate goose RBC at ..... pH and at ..... temperature.
257. Out of horses, mules and donkeys, ... are least susceptible to African horse sickness.
258. Detection of MATSA is used as a diagnostic tool for ..... disease.
259. ..... is a DNA virus disease of Swine transmitted by soft tick of the genus ornithodoros.
260. Corneal edema seen in infectious canine hepatitis is known as .....
261. Button shaped ulcers found in the caecum and colon of pigs are caused by .....virus.
262. ..... toxin of *Stophylococcus aureus* is responsible for pustular dermatitis in dogs.
263. ..... test is used to identify Group B streptococci.
264. ..... bacteria are used to identify *Listeria monocytogenes* and *Listeria ivanovii* respectively in CAMP test.
265. Cervical mucous agglutination test is used to diagnose ..... bacterial infection.
266. Greasy pig disease is caused by .....
267. Strangles is caused by .....
268. Cutaneous streptothirocosis is caused by .....
269. The viruses of measles, ... and .....share common antigens.
270. Bovine malignant catarrhal fever/'snotsiekte' is caused by .....
271. Genus specific epitopes of adenoviruses are located on .....
272. Kyasanur forest disease is transmitted by .....
273. The genome of retrovirus which is rapidly transforming contain fourth gene known as .....
274. Influenza viruses are categorized into ..... haemagglutinins and ..... neuraminidase types.
275. Compared to bacteria fungi prefer moe ..... pH and require free ..... for satisfactory growth.
276. Circling disease is caused by.....
277. Bipolar staining is characteristic of .....
278. Tube agglutination test is used in the diagnosis of .....
279. Bovine kerato conjunctivitis is caused by .....
280. Rinderpest virus belongs to ..... group of virus.
281. Fowl pox virus can be cultivated by the ..CAM..... route of egg inoculation.
282. ..... chemical is used in decontamination of FMD virus.
283. Family ..... consists of smallest RNA viruses.
284. Marek's disease virus belongs to .....HV..... family.
285. The enzyme responsible for elution of virus from RBC is called .....
286. FMD occurs naturally in ..... hoofed animals.
287. IB virus belongs to ..... family.
288. ..... appearance of the kidney is characteristic of Hog cholera.
289. The late complication of Canine distemper in old dog is .....

290. Fowl typhoid is caused by .....
291. Elementary bodies of chlamydiae differentiate into ..... bodies.
292. Poached egg appearance is the colony character of ..... organisms.
293. *Pseudomonas produces* ..... *pigments.*
294. *Mycobacteria is acid alcohol fast because of* ..... *in the cell wall.*
295. Orf disease is otherwise called .....
296. Peste des petits ruminants are rinderpest like disease in .....
297. ..... is a herpes virus causing abortion in cattle.
298. Pseudo rabies is caused by ..... virus.
299. Naglers reaction with *Clostridium pertringens* on egg yolk agar is due to .....
300. The most important reservoir of Weils disease is .....
301. Fowl Coryza in poultry is caused by .....
302. The colonies of *Aspergillus fumigatus* are ..... in colour.
303. Yellowish orange pigment is produced by Mycobacteria species .....
304. The 'string of pearls' on nutrient agar colonies is produced by.....
305. Selective medium for Staphylococci is .....
306. H antigens are prepared by treating the bacterial cells with .....
307. A cutaneous form of erysepels in swine is called .....
308. Ranikhet disease is the other name of .....
309. With Seller's strain the color of Negri bodies is .....
310. H and N type of the highly pathogenic Avian influenza recorded in India is .....
311. African swine fever virus has been recently placed under the family .....

KEY ANSWERS

1	**Decreasing**	2	**254 nm**
3	**Halophiles**	4	**Prokaryotae**
5	**Schroeder and Dusch**	6	**Reducing media**
7	**Plasmids**	8	**Disinfection**
9	**Virions**	10	**Okazaki fragment**
11	**Proline**	12	**Hirst**
13	**IgA**	14	**IgD**
15	**Apoptosis**	16	**Eli Metchnikoff**
17	**Soluble**	18	**Serology**
19	**Cathode**	20	**Antigenicity**
21	***Rhinosporidium seeberi***	22	**Thrush**
23	***Dermatophilus pedis***	24	**Edward's medium**
25	***Clostridium tetani***	26	**Chinese letter**
27	***Erysipelothrix rhusiopathiae***	28	***Haemophilus paragallinarum***
29	**Mollicutes**	30	**Serovar**
31	**Neuraminidase**	32	**Capri**
33	**Marek's**	34	**EDS 76**
35	**Conjunctivitis**	36	**Gumboro disease**
37	**Complex**	38	**Epidemic tremor**
39	**Liver**	40	**Fowl pox**
41	**Pili/fimbriae**	42	**Mycolic acid**
43	**–ve**	44	**Cohn**
45	**Superoxide desmutase**	46	**FITC/Rhodamine**

47	**Capsomeres**	48	**Absorptive/heterotrophic**
49	**Bottle bacilli**	50	**Circo virus**
51	**Cell mediated**	52	**Eli Metchnikoff**
53	**Monocytes**	54	**Sir Mac Farlan Burnnette**
55	**Memory**	56	**Louis Pasteur**
57	**T**	58	**Epitope and paratope**
59	**BOLA**	60	**Cold**
61	***Coxiella burnetti***	62	***Actinobacillus lignieresii***
63	**Proteus**	64	**Edward's**
65	***Neorickettsia helminthoeca***	66	**Corynebacterium**
67	***Haemophilus parasuis***	68	***Moraxella bovis***
69	***Arcanobacterium pyogenes***	70	**PPR**
71	**Bovine viral Diarrhoea virus**	72	**Gyro virus**
73	**Infectious laryngiotracheitis**	74	**Retro virus**
75	**Dunkop**	76	**Avial leucosis**
77	**Retroviridae and Hepdna viridae**	78	**Immature lymphocytes**
79	**Parfocalisation**	80	**Gram negative**
81	**Poly D-glutamic acid**	82	**Mononega virales & Nido virales**
83	**Hepadna**	84	***Cryptococcus neoformans***
85	**Fungus**	86	**Haemagglutination**
87	**Virulence**	88	**Opsonins**
89	**Nucleated**	90	**4; 2**
91	**K; NK**	92	**Hot spots**
93	**TCR**	94	**MAC**
95	**Nucleus and Cell wall**	96	**Capsule**
97	**Plasmid**	98	**ATP**
99	**Photosynthetic bacteria**	100	**38**
101	**Okazaki**	102	**Cell wall**
103	**UV**	104	**Baltimore**
105	**FMD**	106	**Mycolic**
107	**Structural**	108	**Ether/chloroform**
109	**Zoospore**	110	**Elias Fries**
111	**Coenocytic**	112	**Bacteriophage**
113	**Lymphocyte**	114	**Primary**
115	**Reaginic**	116	**Burnet**
117	**Hinge**	118	**Toxin**
119	**Bcl_2**	120	**Bromide**
121	**Zacharias Jansen**	122	**Darkfield**
123	**Gram's and Acid Fast.**	124	**Dipicolinic**
125	**Pox viridae**	126	**Circovirus**
127	**Small pox**	128	**Toxoid**
129	**Sensitivity**	130	**Glial cells**
131	**Antibodies**	132	**Louis Pasteur**
133	**Natural barriers**	134	**Proteins**
135	**Guinea pig**	136	**Fab**
137	**Plasmids**	138	**Sabouraud's Dextrose Agar**
139	**Prokaryotes**	140	**Sexpili**
141	**Clostridium**	142	***Bacillus anthracis***

143	**One**	144	**Penicillin**
145	**Phenol coefficient**	146	**Radiation**
147	**Land Steiner**	148	**Ig**
149	**Epitope**	150	**Haptens**
151	**IgA**	152	**Serum**
153	**T**	154	**Colostrum**
155	**Gamma Globulin**	156	**HI**
157	**Flagella**	158	**160°C for 60 minutes**
159	**Ascospores**	160	**Dimorphism**
161	**Budding; Cytolysis**	162	**Bacteriophages**
163	**nm; µm**	164	**Adjuvant**
165	**Fab**	166	**Activation, Chemotaxis, adherence, ingestion and destruction**
167	**IgG**	168	**Arthus reaction**
169	**Apoptosis**	170	**HRP**
171	**Spores**	172	**Pleomorphism**
173	**Generation time**	174	**Metabolic**
175	**Capsomer**	176	**Mycelium**
177	**Acidic**	178	**Lamboda and Kappa**
179	**CMI**	180	**Spleen and Lymph nodes**
181	**IgA.**	182	**Memory**
183	**Nosocomial**	184	**Kupffer**
185	***Pasteurella multocida***	186	**Erythritol**
187	**Trypsin**	188	**EMJH medium with 5-flurouracil**
189	**V factor**	190	***S. aureus***
191	**Brucella**	192	***Listeria monocytogenes***
193	**Mycobactins and exochelins**	194	***Bacillus anthracis***
195	**Newcastle disease virus, Avian influenza, EDS-76 virus**	196	**Intestinal**
197	**African swine fever**	198	**Acetylcholine**
199	**ELISA**	200	**Genetic reassortment**
201	**Fusion**	202	**Hendra**
203	**Phospholipase Neuraminidase**	204	**Aziridine**
205	**IBR/IPV**	206	**Epizootic hemorrhagic disease virus**
207	**HVT**	208	**Reverse transcriptase**
209	**CFT**	210	**I/V**
211	**HI**	212	**Feather follicle**
213	***C. chauvoei***	214	**Anthrax**
215	**Edema factor, protective antigen and Lethal factor**	216	**Proteus**
217	***Mycoplasma gallisepticum***	218	**Chlamydospores**
219	**Kata/goat plague**	220	**CD and RP**
221	**Negri bodies**	222	**Reverse Transcriptase**
223	**Bollinger**	224	**Rinderpest**
225	**Birna viridae**	226	**Duck plague**
227	**Culicoides**	228	**Erythritol**
229	***C. perfringens***	230	**Acholeplasmataceae**
231	**Fusobacterium**	232	**Leptospira**

233	*Pseudomonas aeruginosa*	234	*Yersinia pestis*
235	Brucella	236	Salmonella
237	Retroviridae (Lenti virus)	238	Coggins
239	Birna viridae	240	Reverse transcriptase
241	Bullet	242	Rinderpest
243	Canine distemper	244	Entero virus (Picorna viridae)
245	Mature adsorptive	246	X and V
247	*Erysipelothrix rhusiopathiae*	248	*Brucella abortus* strain 19
249	Coagulase	250	Diene's
251	*S. agalactiae*	252	*Ehrlichia canis*
253	Intestine	254	CD
255	HVT	256	6.2; 4°C
257	Donkeys	258	Marek's
259	African Swine Fever	260	Blue eye
261	Swine fever	262	Exfoliative
263	CAMP	264	*S. aureus* and *R. equi*
265	Campylobacter	266	*Staphylococcus hyicus*
267	*Streptococcus equi*	268	*Dermatophilus congolensis*
269	CD and RP	270	Herpes virus
271	Pentons	272	Arthropod.
273	Viral oncogene	274	16; 9
275	Acidic; fatty acids	276	*Listeria monocytogenes*
277	*Pasteurella multocida*	278	Brucellosis
279	*Moraxella bovis.*	280	Morbilli
281	CAM	282	2% NaOH
283	Picorna viridae	284	Herpes viridae
285	Neurominidase	286	Cloven
287	Corona viridae	288	Turkey egg
289	Encephalitis	290	*Salmonella gallinarum*
291	Reticulate	292	Mycoplasma
293	Pyocyanin & Pyomelanin	294	Mycolic acid
295	Contageous Pustular dermatitis	296	Sheep and goats
297	IBR	298	Herpes
299	Lecithinase	300	Rodents
301	*Haemophilus paragallinarum*	302	Tan
303	*M. paratuberculosis*	304	*Bacillus anthracis*
305	Mannitol salt agar	306	Formalin
307	Diamond skin disease	308	Newcastle disease
309	Acidophilic	310	H_5N_1
311	Asfar viridae		

III. State TRUE or FALSE:

1. For disinfection of Dairy utensils, the commonly used chemical is phenolic compounds.
2. Formalin is a 27% acqueous solution of formaldehyde gas.
3. Alcohols are unsatisfactory antiseptics when applied on wounds.
4. For disinfection of water storages, chlorine and Ozone are commonly used.
5. Capsule cannot be stained by negative staining method.

6. DNA Oligomerase enzyme helps in the synthesis of new strands of DNA during replication.
7. Biological transmission of disease causing agents is a means of vector transmission.
8. Viruses which comes out through the infected cell by the process of budding are enveloped.
9. The process of endospore formation within a vegetative cell is known as sporogenesis.
10. The smallest animal DNA virus is Foot and Mouth disease virus.
11. Passive immunity is conferred by administration of performed antibodies.
12. Interferons are species specific.
13. "Hot spots" are present in variable regions.
14. IgM has alpha antigenic determinants on their heavy chain.
15. Dendritic cells are antigen presenting cells.
16. Macromolecules of complex structures are better antigen than simple large polymers with identical repetition of subunits.
17. Globulins can be purified from the serum by Ammonium per sulphate.
18. The organ whose function is to regulate the production and differentiation of lymphocytes are known as primary lymphoid organs.
19. Complement are heat stable.
20. The antigenic structure of *Salmonella gallinarum* is 1, 9, 12.
21. Haemophilus requires certain growth promoting substances known as X and V factors.
22. Botryomycosis in cattle is caused by *Staphylococcus aureus*.
23. Rebecca Lancefield proposed a system of serogrouping for staphylococci.
24. Most Bacillus species are motile by peritrichous flagella except *Bacillus anthracis*.
25. Dermatomycoses are commonly called as ring worm.
26. Brooder pneumonia is caused by *Trichophyton gallinae*.
27. Pseudoglander in equines is caused by *Histoplasma farciminosum*.
28. *Clostridium perfringens* type D caused Black quarter in sheep.
29. All strains of *Pasteurella multocida* produce acid but not gas.
30. Marek's disease viral antigen can be detected in the feather tips of infected birds using a radial immuno diffusion test.
31. Tracheal organ cultures are used for isolation of Infectious Bursal Disease virus.
32. Fowl pox virus multiplies in the cytoplasm of epithelial cells with the formation of large intra cytoplasmic inclusion bodies called as borrel bodies which contain Bollinger bodies.
33. All virulent strains of avian influenza isolated to date have been either of the H5 or H7 subtype.
34. During replication, Newcastle disease virus particles are produced with a precursor glycoprotein F0 which has to be cleaved to F1 and F2 for the virus particles to be infectious.
35. Whole blood is used for isolation of Blue tongue virus.
36. N protein is considered to be the major cross reacting antigen of morbilli viruses.
37. In FMD infection both antigen and antibody existed simultaneously in the serum which is very peculiar to FMD infection.
38. Interferon is a viral genome coded product has antiviral activity.
39. Epizootic lymphangitis is caused by *Histoplasma capsulatum*.
40. Botulism is due to the ingestion of preformed toxin.
41. Inverted fir tree growth is produced by anthrax on nutrient agar.
42. Fowl spirochaetosis is caused by Borrelia species.
43. *Corynebacterium equi* is the causative agent for ulcerative lymphangitis in horses.
44. β haemolytic streptococci are mainly classified in Lancefield classification.

45. Listeria shows tumbling movement when grow in glucose broth at 37°C for a period of 6-18 hrs.
46. Mycoplasma require living system for growth.
47. *Salmonella pullorum* is non motile in nature.
48. Dermatophytes are geophilic, zoophilic as well as anthropophilic.
49. Turkey egg appearance of kidney is characteristics of African swine fever.
50. Rabies virus can agglutinate goose RBC.
51. All non enveloped animal viruses have an icosahedron symmetry.
52. PPR and Rinderpest viruses are not immunologically related but identical.
53. Only one serotype in Newcastle disease virus.
54. Duck plague virus can be grown on CAM of chicken eggs.
55. Herpes virus of turkey is used for vaccination against Marek's disease.
56. Blue eye is caused by canine distemper virus.
57. Interferons are always virus specific.
58. Spores are readily killed by Hot air oven.
59. The endoflagella is responsible for gliding motility in Mycoplasma.
60. All viral genomes are haploid.
61. The root like structure in fungi called as vegetative hyphae.
62. Natural transformation is also called as Transfection.
63. Recirculating lymphocytes are mainly B-lymphocytes.
64. *Brucella abortus* is readily phagocytosed by macrophages.
65. The major immunoglobulin present in MALT is IgG.
66. Incomplete antibodies are known as blocking antibodies.
67. Coggin's test is a HI test used to detect equine infectious anemia virus.
68. BHK_{21} is an example of a continuous cell line.
69. Elution of virus from RBCs is due to Transcriptase.
70. The inclusion "Bollinger bodies" are produced in Fowl pox virus infections.
71. Reassortment is common between viruses with segmented genomes.
72. Quelling reaction is related to fimbriae.
73. A double stranded segmented RNA virus is FMD virus.
74. Plasmids are autonomous, self-replicating DNA molecules responsible for drug resistances in bacteria.
75. Blood agar is an example of an enriched medium.
76. The morphological subunit of capsomers is capsid.
77. Fungi having non-septate hyphae belong to deuteromycetes.
78. Polypeptides are usually weak antigens.
79. Complement does not combine with free antigen or antibody, but only with antibody that has combined with antigen.
80. The mantle and medullary cords of lymphocytes are known as "Bursa dependent" and "Thymus dependent areas".
81. Haptens are immunogenic but not antigenic.
82. IgE when compared to IgM is thermostable.
83. Side chain theory of antibody formation was proposed by Jerne.
84. In ruminants IgG_1 is the predominant immunoglobulin found in colostrums and milk.
85. Spleen is an example of a secondary lymphoid organ.
86. Tuberculin reaction is an example of type IH hypersensitivity reaction.
87. Mancini's technique is also known as passive haemagglutination test.
88. Viruses are obligate extracellular parasites.
89. Carbon is one of the micronutrients for bacteria.
90. Flavoproteins are one of the carrier molecules in electron transport chain.

91. Synthesis of a wrong protein as a result of change in nucleotide due to mutation is referred as nonsense mutation.
92. Sex pili is responsible for conjugation in bacteria.
93. Yeast multiply by binary fission.
94. In fungi, conidia are referred as sexual spores.
95. The enzyme RNA dependent RNA polymerase is present in prokaryotic and eukaryotic cells.
96. Retroviruses replicate using reverse transcriptase enzyme.
97. Gamma interferon is responsible for viral interference.
98. Antibody mediated immunity is also called as cell mediated immunity.
99. IgA is the predominant antibody in external secretions.
100. IgM possesses two numbers of antigen binding sites.
101. The soluble B cell receptors are known as antibodies.
102. Agglutination reaction is produced by particulate antigens.
103. Recognition of self-antigens is known as tolerance.
104. Colostrum provides active immunity.
105. Type IV hypersensitivity is cell mediated immune response reaction.
106. The T helper cells are characterized by CD4 receptors.
107. C3 is the major protein in complement system.
108. The ability of the lenses to distinguish two separate points is called as magnification.
109. The Gram negative organisms are less susceptible to Penicillins and Quinolones.
110. The word "EUKARYOTE" means true nucleus.
111. Gram negative organisms take up the colour of secondary stain.
112. The time in which 90% of the bacterial population is killed at a given temperature is called as 'D' value.
113. Selective permeability is a characteristic function of plasma membrane.
114. Group translocation is a passive process of transport across membranes.
115. The use of chemosterilants suffer a major disadvantage of being a carcinogen.
116. Bacterial contamination in a water sample can be measured using Most Probable Number.
117. Iodophore compounds are superior to Ticture Iodine.
118. Natural or naïve immunity is also called as specific immunity.
119. The term immunoglobulin include antibodies alone.
120. Intracellular antigens are removed by humoral immune response.
121. Directed Migration of neutrophils is called chemotaxis.
122. Lymphocytes that do not show either T or B cell preoperties or surface markers are called NK cells.
123. Bone marrow acts both as primary and secondary lymphoid organs.
124. Negative selection is a process of eliminating cells that respond to nonself antigen.
125. Dentritic cells arise from myeloid lineage of haemopoictic stem cells.
126. Philip Hourowitz and his colleagues put forth the instructive theory of antibody formation.
127. The required immunity imparted in an animal as a result of infection followed after recovery is called natural active immunity.
128. Interferons are virus specific.
129. Virus contain only one type of nucleic acid, either DNA or RNA.
130. Corona virus are crown shaped.
131. The structural unit of viral envelop is a capsomer.
132. Plasmids are extrachromosomal elements.
133. Streptomycin inhibits the synthesis of bacterial cell wall.

134. Heterotrophic organism require an organic carbon source for growth.
135. The production of bacterial exotoxin is under the control of genes, which occur mainly on plasmids.
136. Blastospores are asexual spore that reproduce by budding from mother cell.
137. Sabouraud's dextrose agar is not suitable for fungal growth.
138. Type I hypersensitivity reaction is mediated by IgA.
139. Exotoxins are usually produced by gram negative bacteria.
140. Antigen found on the surface of RBC are called as serogroup antigens.
141. Bacteria with capsules are poorly phagocytosed.
142. Second line of defence is the mononuclear phagocytic system.
143. Interferons are glycoproteins synthesized in response to virus infection.
144. Thymus is an secondary lymphoid organ.
145. Complement is a heat-stable serum protein.
146. Lysozymes are antibacterial enzyme present in phagocytic cells.
147. Protein A binds to the Fc region of IgG.
148. Lactophenol cotton blue is the stain of choice for fungal staining.
149. Dimorphic fungi produce yeast like parasitic growth at 37°C and mycelial saphrophtic growth at 22°C.
150. The unit of measurement of length of virus is microns.
151. Enveloped viruses are resistant to lipid solvents.
152. Sex pili are useful in bacterial transformation.
153. Demonstration of characteristic inclusion bodies in tissue section is considered as a diagnostic method for certain viral diseases.
154. Jumping genes are known as transposons.
155. Humoral immunity acts against the exogenous antigen.
156. Toxin on suitable treatment becomes antitoxin.
157. The primary immune response is also known as anamestic phenomenon.
158. Precipitation occurs when the antigen is in the soluble form.
159. IgM is made up of six identical subunits.
160. Lymphocytes that have not interacted with antigen is referred to as naïve cells.
161. Dendritic cells are phagocytic cells.
162. Molecules that enhances phagocytosis are known as opsonins.
163. Inactivated vaccines need not be tested for safety and potency.
164. Both B and T cells can respond to an antigen even if it is not associated with an MHC molecule.
165. Candida albicans is the etiological agent for thrush.
166. Rochalima Quintana can grow on non living media.
167. Rhinosporidiosis is a disease of cattle, horse, mules, dogs and humans.
168. Epizootic lymphangitis is caused by *Histoplasma capsulatum.*
169. Organisms included in the fungi imperfecti are those which do not have a sexual stage of development.
170. Coagulase producing staphylococcus species are non-pathogenic in nature.
171. Diamond skin disease in cattle is caused by *Erysipelothrix rhusiopathiae.*
172. *Pseudomonas aeruginosa* is called as blue pus bacillus.
173. Fowl spirochaetosis is caused by *Borrelia* species.
174. Higher salt content is incorporated in the medium for the isolation of streptococci.
175. BVD and mucosal disease are clinically dissimilar disease syndromes with a common viral etiology.
176. IBD can be diagnosed by agar gel diffusion test.
177. PPR virus has close antigenic relationship with RP.

178. Replication of pox virus occurs in the Nucleus.
179. LaSota strain is mesogenic strain.
180. All enveloped viruses are resistant to ether and chloroform.
181. Bollinger bodies are present in Rabies disease.
182. IBD is a immunosuppressive type of disease.
183. FMD affected young calves die of myocarditis.
184. Medusa head type colonies are characteristic of *Moraxella bovis*.
185. All Clostridia are nonmotile except *C. perfringenes*.
186. Vi antigen is found in *S. gallinarum*.
187. Fusobacterium is a gram positive anaerobe which causes foul in the foot.
188. Elementary body of Chlamydiae are infective.
189. Rickettsiae are called energy parasites.
190. Visceral form of Listeriosis is also known as Circling disease.
191. Selenite broth is the enrichment medium used for the cultivation of Salmonella.
192. *Pasturella multocida* produces β-hemolysis on blood agar.
193. Mycobactin is required for the cultivation of *Mycobacterium leprae*.
194. Borrel bodies are elementary bodies of fowl pox.
195. H7N7 amd H3N8 influenza viruses cause infection mainly in swine.
196. Gama Herpes viruses produce tumors.
197. Blue tongue virus is transmitted through sand flies.
198. IBDV causes severe immunosuppression and does not involve bursa fabricious.
199. Marek's disease vaccination is usually done in day old chicks.
200. Reo viruses have diploid genome.
201. Chicken pox in humans is contracted from chicken affected with pox virus.
202. Attenuation of Rabies virus is done by passage into egg embryos.
203. Bovine parainfluenza virus 3 causes shipping fever in cattle and sheep.
204. Lactophenol cotton blue is the stain of choice for fungal staining.
205. Endothrix type spores are produced along the outer surface of hairs.
206. Most of Rickettsia and Chlamydia prefer to grow on non-living media.
207. Calfhood vaccination is advised in controlling abortions due to *Campylobacter foetus*.
208. *Clostridium tetani* has central spherical spores.
209. The causative agent for Heartwater is *Cowdria ruminantium*.
210. Edwards media is selective medium for Streptococci.
211. Lumpy jaw is caused by *Actinomyces bovis*.
212. Botulism is due to the ingestion of preformed toxin.
213. Pearl eye is one of the clinical forms of marek's disease.
214. Newcastle disease cannot be diagnosed by HA and HI.
215. Herpes virus of turkey is used for vaccination against Marek's disease.
216. Street virus is the virulent type of Rabies virus.
217. PPR affects large ruminants.
218. Gasping disease is otherwise called Avian infectious bronchitis in chickens.
219. β propiolactone is an adjuvant.
220. EDS-76 is an adeno virus.
221. Leptospiral motility are readily observed in fresh preparation under light microscope.
222. The A and M antigens of *Brucella abortus* usually occur in a ratio of 1:20.
223. *Pasteurella multocida* organisms grow well in MacConkey's bile salt agar.
224. Struck in sheep is caused by *Clostridium welchii* type C.
225. *Campylobacter fetus* is antigenically different from *Vibrio fetus*.
226. Calf diphtheria is caused by *Corynebacterium diphtheriae*.
227. Rickettiasiae are the obligate intracellular organisms.

228. Fungus can synthesize their own chlorophyll.
229. Moniliasis is caused by *Candida albicans*.
230. African swine fever is caused by hog cholera virus.
231. Capri pox virus infects cattle.
232. Newcastle disease virus has many serotypes.
233. Dwarfing in chicken embryos are seen in infectious bronchitis.
234. FMD virus is a smallest DNA virus.
235. Canine distemper virus has only one serotype.
236. Blue tongue virus has 32 serotypes.
237. IBD is a immunosuppressive disease.
238. Fowl plague is a chronic disease in chickens.
239. Pearl eye is one of the forms of IBD.
240. Spore is the multiplying stage of bacterium.
241. Capsular antigens are known as H antigens.
242. The genus Candida was formerly called Monilla.
243. Fungi are devoid of chlorophyll.
244. Johne's disease is a chronic infection affecting intestine of cattle and sheep.
245. Fowl cholera and hog cholera are caused by same micro-organism.
246. Bacillary white diarrhoea in chicks is caused by *S. gallinarum*.
247. Rickettsial agents do not possess cell wall.
248. Elementary bodies of Chlamydiae are infectious but reticulate bodies are not infectious.
249. Glasser's disease in pigs is caused by *Haemophilus suis*.

KEY ANSWERS

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
F	F	T	T	T	F	T	T	T	F	T	T	T	F	T
16	17	18	19	20	21	22	23	24	25	26	27	28	29	30
T	F	T	F	T	T	T	F	T	T	F	F	F	T	T
31	32	33	34	35	36	37	38	39	40	41	42	43	44	45
F	F	T	T	T	T	F	F	T	T	F	T	F	T	F
46	47	48	49	50	51	52	53	54	55	56	57	58	59	60
F	T	T	F	T	T	F	T	F	T	F	F	F	F	F
61	62	63	64	65	66	67	68	69	70	71	72	73	74	75
F	F	F	T	F	T	F	T	F	T	T	F	F	T	T
76	77	78	79	80	81	82	83	84	85	86	87	88	89	90
F	F	F	T	F	F	F	F	T	T	F	F	F	F	T
91	92	93	94	95	96	97	98	99	100	101	102	103	104	105
T	T	F	F	F	T	T	F	T	F	T	T	T	F	T
106	107	108	109	110	111	112	113	114	115	116	117	118	119	120
T	T	F	T	T	T	T	T	T	F	T	T	F	T	F
121	122	123	124	125	126	127	128	129	130	131	132	133	134	135
T	T	T	F	T	T	T	F	T	T	F	T	F	T	T
136	137	138	139	140	141	142	143	144	145	146	147	148	149	150
T	F	F	F	F	T	T	T	F	F	T	T	T	T	F
151	152	153	154	155	156	157	158	159	160	161	162	163	164	165
T	F	T	T	T	F	F	T	F	T	T	T	F	F	T
166	167	168	169	170	171	172	173	174	175	176	177	178	179	180
T	T	F	T	F	F	F	T	F	T	T	T	F	F	F

181	182	183	184	185	186	187	188	189	190	191	192	193	194	195
F	T	T	F	T	F	F	T	F	F	T	F	F	F	F
196	197	198	199	200	201	202	203	204	205	206	207	208	209	210
T	F	F	T	F	F	T	T	T	F	F	F	F	T	T
211	212	213	214	215	216	217	218	219	220	221	222	223	224	225
T	T	T	F	T	T	F	T	F	T	F	F	F	T	F
226	227	228	229	230	231	232	233	234	235	236	237	238	239	240
F	T	F	T	F	F	F	T	F	T	F	T	F	F	F
241	242	243	244	245	246	247	248	249						
F	T	T	T	F	F	F	T	T						

III. PART A - Match the following:

I)

1. Dinger's ring	a. Salmonella
2. Citrate	b. Buffaloes
3. Ferkel typhoid	c. Man
4. Weil felix reaction	d. Mycoplasma
5. Barbone	e. CBPP
6. Sterol	f. *M. paratuberculosis*
7. Bramaputra Valley Disease	g. *Clostridium septicum*
8. Sterne vaccine strain	h. *Bacillus anthracis*
9. Citron shaped	i. Pigs
10. Johne's disease	j. Leptospira

Ans: 1. j 2. a 3. i 4. c 5. b
6. d 7. e 8. h 9. g 10. f

II)

1. FMD	a. Button ulcer
2. Pseudorabies	b. Hog cholera
3. Japanese encephalitis	c. Newcastle disease virus
4. Swine fever virus	d. Mad itch
5. Influenza in pigs	e. Asfivirus
6. Bovine viral diarrhea	f. Cattle, sheep, swine & horse
7. African swine fever	g. Mixing vessel theory
8. Vesicular stomatitis	h. Pigs, horse and human
9. Transmissible gastroenteritis	i. Cattle, sheep and pigs
10. Hog cholera	j. Corona virus disease

Ans: 1. i 2. d 3. h 4. c 5. g
6. b 7. e 8. f 9. j 10. a

III)

1. Osmophiles	a. Salty habitat
2. Filtration	b. Rat illeal loop test
3. Protein coagulation	c. Polypeptide
4. Crystal violet	d. Acidic in nature
5. Chemosterilent	e. Autoclaving
6. Synergistic effect	f. Oil
7. Joseph lister	g. Ethylene oxide
8. Schroder & Duch	h. Sulfa drugs
9. Endotoxin	i. Cotton wool plug
10. Exotoxin	j. Antisepsis

Ans: 1. a 2. f 3. e 4. d 5. g
6. h 7. j 8. i 9. b 10. c

IV)

1. ADCC	a. Epitope
2. MHC	b. Immune infiltration
3. CD	c. Myeloid lineage
4. Toxin	d. Pentamer
5. Antigen	e. Lymphokine
6. Antibody	f. Idiotype
7. Inflammation	g. NK cells
8. Interferon	h. HLA
9. White blood cells	i. T cells
10. 1gM	j. Illeal loop test

Ans: 1. g 2. h 3. i 4. j 5. a
6. f 7. b 8. e 9. c 10. d

V)

1. Cork screw	a) Proteus
2. Medusa head	b) *M. paratuberculosis*
3. Chinese letter	c) *Clostridium chauvoei*
4. Ray fungus	d) *Candida albicans*
5. Bundle of faggots	e) Salmonella
6. Thrush	f) *Actinomyces bovis*
7. Kauffman-white scheme	g) *Mycobacterum tuberculosis*
8. Swarming	h) Leptospira
9. Tennis racquet	i) Corynebacterium
10. Herrold's medium	j) *Bacillus anthracis*

Ans: 1. h 2. j 3. i 4. f 5. g
6. d 7. e 8. a 9. c 10. b

VI)

1. Lenti virus	a) Rinderpest
2. Provirus	b) Electron microscope
3. Arena virus	c) Rabies
4. Herring bone nucleocapsid	d) Reverse transcriptase
5. Bull virus	e) Equine infectious anaemia
6. Prions	f) Paramyxo virus
7. Epidemic tremor	g) Sand like particles
8. Knoll and Ruska	h) Retro virus
9. Baltimore	i) Avian encephalomyelitis
10. Goose RBC	j) Scrapie

Ans: 1. e 2. h 3. g 4. f 5. a
6. j 7. i 8. b 9. d 10. c

VII)

1. Pro antigen	a) Reaginic antibody
2. Alum	b) Neutrophils
3. EAC rosette	c) Cytotoxic T-cells
4. Repeated phagocytosis	d) Passage on natural host
5. CD 32	e) Helper T-cells
6. MHC-II	f) B cells
7. Amoebiasis	g) Picryl chloride
8. Exaltation	h) Adjuvant
9. CD^8	i) B or T cells not exposed to antigen
10. Naïve cells	j) Macrophages

Ans: 1. g 2. h 3. f 4. j 5. b
6. e 7. a 8. d 9. c 10. i

VIII)

1. Indole	a) Mycolic acid
2. Methyl red test	b) RCM
3. Gentamicin	c) Moller method
4. Sulfa drugs	d) Hydrogen peroxide
5. Anaerobic media	e) Gram +ve bacteria
6. Basal media	f) Tryptophane
7. Catalase test	g) pH below 5
8. Spore stain	h) Bactericidal
9. Acid fast staining	i) Peptone water
10. Teichoic acid	j) Bacteriostatic

Ans: 1. f 2. g 3. j 4. h 5. b
6. i 7. d 8. c 9. a 10. e

IX)

1. ELISA	a) Haemolysin
2. T_h cells	b) Mast cells
3. Thymus	c) Active immunity
4. Pentamer	d) NewCastle disease virus
5. CFT	e) Antitoxin
6. Hypersensitivity	f) OPD
7. Vaccination	g) Primary lymphoid organ
8. HI test	h) IgM
9. Von Behring	i) Secondary immune response
10. Anamnestic response	j) MHC class II antigen

Ans: 1. f 2. j 3. g 4. h 5. a
6. b 7. c 8. d 9. e 10. i

X)

1. Cell wall synthesis inhibition	a) Prokaryotic cell
2. LPS	b) Plasma membrane
3. Antiseptic surgery	c) Exotoxins
4. Phagocytosis	d) Endotoxins
5. Synergistic effect	e) Metchnikoff
6. Chemosterilant	f) Joseph Lister
7. Crystal Violet	g) Antibiotics
8. Protein coagulation	h) Techoic acid
9. Filtration	i) Halophiles
10. Fungi	j) Sabourauds agar
	k) Minimum essential medium
	l) Autoclave
	m) Quinolones
	n) Mordant
	o) Nystatin
	p) Ethylene oxide
	q) Sulfa drugs
	r) Petroll-Hausser chamber
	s) Chemostat
	t) Acidic dye

Ans: 1. g 2. d 3. f 4. e 5. q
6. p 7. t 8. l 9. k 10. j

XI)

1. Escapes blood vessel	a) Metchnicoff
2. Phagocytosis	b) IgD
3. T_H	c) Bacterial septic shock
4. Cytokines	d) Antiviral cytokines
5. Bordet	e) MHC-II
6. IL-16	f) IgB
7. IgD	g) Long hinge region
8. Secondary response	h) Anamnestic response
9. Allotype	i) Complement
10. Induction of tolerance to self tissue	j) IgB (T)
	k) Issac and Lindermann
	l) IgA
	m) Monocytes
	n) Interferons
	o) Isotype
	p) Bcl_2
	q) IgM
	r) Inflammation
	s) Hyper sensitivity
	t) Cancer immunity

Ans: 1. m 2. a 3. e 4. n 5. i
6. d 7. g 8. h 9. j 10. t

XII)

1. Louis Pasteur	a) Interferron
2. Blood agar	b) Capsid
3. Complete virus particle	c) Inclusion bodies
4. Plasmid	d) Mycolic acid
5. Antiviral	e) Enriched medium
6. Virus protein coat	f) Rabies vaccine
7. Adenoviruses	g) Drug resistance
8. Reoviruses	h) Virion
9. Reminants or collection of viral particles	i) Icosahedral
10. Mycobacteria	j) Double stranded RNA

Ans: 1. f 2. e 3. h 4. g 5. a
6. b 7. I 8. j 9. c 10. d

XIII)

1. Antigen	a) Cell differentiation and proliferation
2. Antibody	b) Present in microbes
3. Complement	c) IgG
4. Vaccines	d) IgM
5. Plasma cells	e) Antigen processing
6. Macrophage	f) Artificial active immunity
7. Booster	g) Specific to the inducing antigen
8. Early antibodies	h) Proteins that destroy microbial antigens
9. Late antibodies	i) Vaccine given for the second time
10. Cytokines	j) Activated B cells

Ans: 1. b 2. g 3. h 4. f 5. j
6. e 7. i 8. d 9. c 10. a

XIV)

1. Van Levan hock	a) Spirochaetes
2. Louis Pasteur	b) Double strand DNA
3. Twort	c) Staining of fungus
4. Papova viridae	d) Bacteriophage
5. Indian ink	e) Microscope
6. Lactophenol cotton blue	f) Rabies vaccine
7. Albert's stain	g) Retroviridae
8. Axial filaments	h) Volutin granules
9. Parvoviridae	i) Capsule staining
10. Reverse transcriptase	j) Single stranded DNA

Ans: 1. e 2. f 3. d 4. b 5. i
6. c 7. h 8. a 9. j 10. g

XV)

1. Issacs and Lindermann	a) Exogenus antigen
2. Yalow	b) Dimer
3. Emil von behring	c) Delayed hypersensitive reaction
4. MHC class I	d) Pentamer
5. MHC class II	e) Antitoxin therapy
6. IgA	f) Interferons
7. Tuberculin reaction	g) Endogenous antigen
8. IgM	h) Radioimmunoassay
9. Mast cell	i) Parasitic infection
10. IgE	j) Anaphylaxis

Ans: 1. f 2. h 3. e 4. g 5. a
6. b 7. c 8. d 9. j 10. i

XVI)

1. Flagella	a) Frame shift
2. Fimbriae	b) Jumping genes
3. Plasmid	c) Interferon
4. RNA dependent DNA polymerase	d) Age attenuated fowl cholera vaccine
5. Episome	e) Flagellin
6. Peplomers	f) Pilin
7. Point mutation	g) Antibiotic resistance
8. DNA dependent DNA polymerase	h) Viral transcriptase
9. Issacs and Lindermann	i) Reverse transcriptase
10. Louis Pasteur	j) Spikes

Ans: 1. e 2. f 3. g 4. i 5. b
6. j 7. a 8. h 9. c 10. d

XVII)

1. Mast cells	a) Side chain theory
2. Null cells	b) Human blood groups
3. Plasma cesIls	c) ELISA
4. Dendritic cells	d) Secondary lymphoid organ
5. Paul Ehrlich	e) Primary lymphoid organs
6. Karl Landsteiner	f) Cytotoxic cells
7. Primary binding test	g) Hypersensitivity reaction
8. Secondary binding test	h) Antibody secreting cells
9. Thymus	i) Antigen presenting cells
10. Spleen	j) AGPT

Ans: 1. g 2. f 3. h 4. i 5. a
6. b 7. c 8. j 9. e 10. d

XVIII)

1. Heart water	a) *E. coli*
2. Medusa head	b) *Actinobacillus lignieresi*
3. Cork screw	c) *Pasteurella multocida*
4. Chinese letter	d) *Cowdria ruminantium*
5. White scour in calves	e) Leptospira
6. Bumble foot	f) *Mycobacterium tuberculosis*
7. Ray fungus	g) Corynebacterium
8. Wooden tongue	h) *Staphylococcus aureus*
9. Bundle of faggots	i) *Bacillus anthracis*
10. Bipolar appearance	j) *Actinomyces bovis*

Ans: 1. d 2. i 3. e 4. g 5. a
6. h 7. j 8. b 9. f 10. c

XIX)

1. Canine distemper	a) Big liver disease
2. Blue tongue	b) Segmented RNA
3. Avian diphtheria	c) Paralysis
4. Syncytia	d) Hard pad disease
5. Aviadeno virus	e) Lasota vaccine
6. ALC	f) Fowl pox
7. Newcastle disease	g) EDS-76
8. Retro viridae	h) Polykaryolytes
9. Influenza virus	i) Reverse transcriptase
10. Marek's disease	j) Sheep

Ans: 1. d 2. j 3. f 4. h 5. g
6. a 7. e 8. i 9. b 10. c

XX)

1. Dysgonic	a) Pseudomonas spp
2. Bovine mastitis	b) *Brucella abortus*
3. Lumpy jaw	c) *Moraxella bovis*
4. Lamsiekte	d) *Mycobacterium bovis*
5. Strain 19 vaccine	e) *K. pneumoniae*
6. Pink eye	f) Haemophilus spp.
7. Fried Landers bacillus	g) *N. asteroids*
8. Polar flagella	h) *Actinomyces bovis*
9. Pyocyanin	i) Campylobacter spp.
10. NAD	j) *C. botulinum*

Ans: 1. d 2. g 3. h 4. j 5. b
6. c 7. e 8. i 9. a 10. f

XXI)

1. Ovine retro virus	a) Rubarth's disease
2. Hog cholera	b) Rous sarcoma virus
3. Pseudocow pox	c) Red nose condition
4. Equine infectious anemia	d) Abortion in horses
5. Avian retro virus	e) Jaagsiekte
6. Infectious canine hepatitis	f) Milkers nodule
7. Bovine herpes virus I	g) Button ulcers
8. Equine herpes virus I	h) Coggins test

Ans: 1. e 2. g 3. f 4. h 5. b 6. a 7. c 8. d

XXII)

1. CRD	a) *Haemophilus paragallinarum*
2. Thrush	b) *Salmonella pullorum*
3. Mallein test	c) *Mycoplasma gallisepticum*
4. Listeria	d) *Candida albicans*
5. Torulosis	e) Tumbling movement
6. Snoring disease	f) Cryptococcus
7. X and V factors	g) *Actinomyces pyogenes*
8. Summer mastitis	h) *Pasteurella multocida*
9. Bacillary white diarrhoea	i) Burkholderia
10. Haemorrhagic septicaemia	j) *Rhinosporidium*

Ans: 1. c 2. d 3. i 4. e 5. f
6. j 7. a 8. g 9. b 10. h

XXIII)

1. Blue tongue	a) Rinderpest
2. Wart virus	b) Haemorrhagic enteritis
3. Borrel bodies	c) Rabies virus
4. Fowl plague	d) Papilloma virus
5. Cattle plague	e) Ranikhet virus
6. Crown shaped	f) ILT
7. LaSota strain	g) Orbi virus
8. Parvo virus	h) Fowl pox
9. Bullet shaped	i) Infectious bronchitis virus
10. Pump handle respiration	j) Influenza virus

Ans: 1. g 2. d 3. h 4. j 5. a
6. i 7. e 8. b 9. c 10. f

CHAPTER 10
VETERINARY PHARMACOLOGY & TOXICOLOGY

I. Choose the correct answer:

1. Theobromine is
   a) 1,3,7 trimethyl xanthine.
   b) 3,7 dimethyl xanthine.
   c) 1,3 dimethyl xanthine.
   d) 1,7 dimethyl xanthine.

2. Innovar-vet is a combination of
   a) Droperidol with Etorphine.
   b) Etorphine with Acepromazine.
   c) Acepromazine with Xylazine.
   d) Fentanyl with Droperidol.

3. One of the following antibiotic is contraindicated with barbiturates
   a) Penicillin
   b) Streptomycin
   c) Chloramphenicol
   d) None of the above

4. The water turnover in an immature animal is approximately
   a) 65 ml/kg/day.
   b) 130 ml/kg/day
   c) 10% of the body weight
   d) None of the above.

5. Gun metal kidney is seen in poisoning due to
   a) Arsenic
   b) Copper
   c) Ferrous
   d) None of the above

6. The specific antidote of Iron is
   a) BAL
   b) Penicillamine
   c) Desferrioxamine
   d) None of the above

7. Bordeaux mixture contamination causes toxicity due to
   a) Copper
   b) Arsenic
   c) Mercury
   d) None of the above

8. A fungal source for autonomic drug is
   a) Clostridium
   b) Penicillium notatum
   c) Claviceps purpurea
   d) Pilocarpus jaborandi

9. A synthetic mydriatic agent
   a) Homatropine
   b) Atropine
   c) Scopalamine
   d) DFP

10. The following drugs have a catecholamine structure except
   a) Isoprenaline
   b) Nor-adrenaline
   c) Ephedrine
   d) Dopamine

11. Which one of the following has the maximum CNS stimulant action
   a) d-amphetamine
   b) Adrenaline
   c) l-amphetamine
   d) Isoprenaline

12. A cholinesterase reactivator
    a) Moxidectin
    b) Pralidoxime
    c) Monensin
    d) Diminazine

13. An inhibitor of COMT
    a) Cholinesterase
    b) Reserpine
    c) Pyrogallol
    d) Pargyline

14. A cytotoxic antibiotic
    a) Actinomycin-D
    b) Chloramphenicol
    c) Ciprofloxacin
    d) Fluoxetine

15. An antifungal antibiotic
    a) Amphotericine-B
    b) Ampicillin
    c) Neomycin
    d) Lincomycin

16. Sulphonamide of choice in the treatment of urinary tract infection is
    a) Sulphadiazine
    b) Sulphaguanidine
    c) Sulphaethoxypyridazine
    d) Sulfisoxazole

17. Rapid intravenous injection of serotonin produces
    a) Triple response
    b) Triphasic response
    c) Anaphylaxis
    d) Hypotension

18. A selective AT1 antagonist
    a) Saralasin acetate
    b) Enalapril
    c) Captopril
    d) Losarten

19. A safety measure which includes consideration of steepnewss of Log D-R curve
    a) ED50
    b) Therapeutic index
    c) Therapeutic ratio
    d) efficacy

20. A beta blocker used as an antiarrhythmic agent
    a) Verapamil
    b) Phentolamine
    c) Propranolol
    d) Nifedipine

21. Digitalis glycosides acts by inhibiting
    a) Ca channels
    b) adrenergic receptors
    c) Na-K ATPase
    d) Na channels

22. The enzyme present in the animal body which converts cyanide to much less toxic cyanate
    a) Catalase
    b) Rhodanase
    c) Cytochrome oxidase
    d) None of the above

23. Dose of Atropine in O.P. poisoning can be reduced by simultaneous administration of
    a) Calcium
    b) 2-PAM
    c) Coramine
    d) EDTA

24. Gamma isomer of B.H.C. is known as
a) Chlordane b) Aldrin
c) Lindane d) Dieldrin

25. The only known naturally occurring carbamate ester
a) Carabaryl b) Eserine
c) Octachlor d) Sevin

26. Dimethyl dichloro vinyl phosphate (DDVP) is otherwise known as
a) Parathion b) Dichlorvos
c) Pyrolan d) B.H.C.

27. Neuromuscular blockage with tubocurarine can be overcome by
a) Neostigmine b) Acetyl choline
c) Bethanacol d) None of the above

28. Anaesthesia with compounds having high blood gas solubility
a) The induction and recovery is fast b) Induction is fast but recovery is slow
c) Induction is slow and recovery is fast d) Both induction and recovery is slow

29. Ketamine produce
a) Marked analgesia b) Catalepsy
c) Dissociative anaesthesia d) All the above

30. When combined effect of two drug is greater than the sum of the effect of each agent given alone the drug is said to be
a) Additive b) Synergistic
c) Antagonist d) None of the above

31. Morphine produce CNS stimulation
a) In dogs b) In bovines
c) In cats d) None of the above

32. Xylazine is an
a) Alpha 2 adrenergic agonist b) A very powerful analgesic
c) A muscle relaxant d) All the above

33. Depth of anaesthesia is better controlled with
a) Dissociative agents b) Injectable anaesthetics
c) Gasious inhalent anaesthetics. d) All the above.

34. PGF2 alpha can be used as
a) Leuteolytic agent b) Abortificiant
c) Synchronisation of estrum d) All the above

35. Dose of magnesium sulphate as a purgative in cattle
a) 5 gm. b) 500 gm
c) 50 gm d) None of the above

36. A gut acting sulphonamide
a) Sulphamethoxazole
b) Sulphaguanidine
c) Sulfisoxazole
d) Sulphacetamide

37. Site of action of penicillinase
a) Thiazolidine ring
b) Betalactum ring
c) Side chain
d)All the above

38. First quinolone synthesised
a) Cinoxacin
b) Nalidixic acid
c) Norfloxacin
d) None of the above

39. Duration of action of benzathin penicillin
a) Two weeks
b) Three days
c) One week
d) Two days

40. Aminoglycosides are administered
a) Orally only
b) Parenterally
c) Both oral and parenteral
d) Topically

41. Sucidal inhibitor of betalactamase
a) Imipenem
b) Aztreonam
c) Clavulanic acid
d) Monolactam

42. Absorption of a drug is favoured by
a) Low ionization and high water solubility
b) Low ionization and high lipid solubility
c) High ionozation and low lipid solubility
d) High ionozation and high water solubility

43. Acidic drugs are mostly bound to
a) Albumin
b) Transferrin
c) Lipoprotein
d) None of the above

44. Quinolones developed for Vety. use
a) Enrofloxacin and ciprofloxacin
b) Danofloxacin and enrofloxacin
c) Enrofloxacin and norfloxacin
d) Norfloxacin and danofloxacin

45. The best example for congenital photosensitivity is
a) Plumbism
b) Porphyria
c) Albinism
d) Lantana

46. The most potent fraction of aflatoxin
a) G1
b) M2
c) B1
d) None of the above

47. Facial eczema is a disease condition caused by
a) Penicillin
b) Aspergillus
c) Fusarium
d) Sporodesmium

48. The sub acute selenium toxicity is termed as
a) Blind staggers
b) Pine
c) Limber neck
d) Burtons line

49. The most potent cardiac glycoside is
a) Digitoxin
b) Oubain
c) Digoxin
d) Gitoxin

50. Rule out one which is not a mucolytic expectorant
a) Bromhexine
b) Acetyl cysteine
c) Dembrexine
d) Guaiacol

51. One drastic purgative
a) Castor oil
b) Glycerin
c) Barium chloride
d) Magnesium sulphate

52. The antidote for copper toxicity is
a) D-Penicillamine
b) BAL
c) Dimercaprol
d) Protamine sulphate

53. One dopamine antagonist which will act as antemetic and prokinetic drug
a) Cisapride
b) Metaclopramide
c) Xylazine
d) Ranitidine

54. Posology deals with
a) Dosage
b) Dosage forms
c) Source
d) Weights and measures

55. The antiseptic action of potassium permanganate is due to
a) Reducing action
b) Antioxidant
c) Astringent
d) Oxidising action

56. An intramuscular anaesthetic is
a) Xylaxine
b) Tiletamine
c) Fentanyl
d) Thiopentone sodium

57. A potassium sparing diuretic
a) Triamterine
b) Acetazolamide
c) Furesemide
d) Thiazide

58. An example of liquid alkaloid
a) Atropine
b) Arecoline
c) Pilocarpine
d) Hyoscine

59. A cyanogenetic glycoside present in sorghum
a) Linamerin
b) Lotaustralin
c) Amygdaline
d) Dhurrin

60. Endosulphan insecticide is an example of
a) Cyclodiene
b) Pyrethroid
c) Organophosphate
d) Carbamate

61. An analog of diclofenac with selective COX2 inhibition
a) Meloxicam
b) Nimesulide
c) Lumiracoxib
d) Rofecoxib

62. The PABA antagonist that have bacteriostatic action against *Mycobacterium leprae*
a) Sulfadoxine
b) Dapsone
c) Sulfamethoxazole
d) Sulfaquinoxaline

63. It is one of the safest of the tetracyclines for the treatment of extra renal infections in patients with renal failure
a) Doxycycline
b) Minocycline
c) Tetracycline
d) Oxytetracycline

64. Drug used to treat the intestinal forms of amoebiasis
a) Metronidazole
b) Diloxanide furoate
c) Nifurtimox
d) Chloroquine

65. M1 receptor antagonist that suppress neural stimulation of acid production
a) Protripyline
b) Pirenzipine
c)Atropine
d)Omeprazole

66. Most common anticholinergic agent in the prevention and treatment of motion sickness
a) Cyclizine
b) Domperidone
c) Scopolamine
d) metoclopramide

67. It is an indirectly acting sympathomimetic amine and substrate for monoamino oxidase
a) Pargyline
b) Isoprenaline
c) Salbutamol
d) Tyramine

68. Death from organophosphorus toxicity is mainly due to
a) Cardiac failure
b) Pulmonary edema
c) Renal failure
d) Respiratory failure

69. Poison that cause respiratory insufficiency by increasing tissue oxygen demand
a) Paraquat
b) Copper
c) H_2S
d) Chlorophenol

70. The puffer fish poison selectively block axonal conduction by inhibiting voltage gated Na+ channels
a) Alpha latrotoxin
b) Batrachotoxin
c) Tetrdotoxin
d) Beta bangarotoxin

71. The cephalosporin antibiotic with methylthiotetrazole (MTT) side chain that cause bleeding and disulfiram like effect
a) Cephalexin
b) Cefamandole
c) Cefoxitin
d) Cefotaxime

72. The antibiotic used for the prophylaxis of infections with chloroquine resistant strains of *P. falciparum*
a) Sulfadoxine
b) Ciprofloxacin
c) Doxicycline
d) Clarithromycin

73. An antineoplastic antibiotic that has the potential to cause pulmonary toxicity
a) Bleomycin
b) Dactinomycin
c) Doxorubicin
d) Mitomycin

74. The fluoroquinolone with good activity against anaerobic bacteria
a) Ofloxacin
b) Norfloxacin
c) Trovafloxacin
d) Ciprofloxacin

75. An antibiotic that is a potent inducer of hepatic microsomal enzyme system
a) Clindamycin
b) Chloramphenicol
c) Azithromycin
d) Rifampin

76. An anticestodal drug with principal activity against immature flukes only
a) Triclabendazole
b) Diamphenethide
c) Rafoxanide
d) Nitroxynil

77. The drugs which are extensively used to treat canine behaviour problems
a) Alprazolam
b) Buspirone
c) Fluoxetine
d) All the three

78. The use of this tranquilizer alone is contraindicated in horses
a) Acepromazine
b) Promazine
c) Chlorpromazine
d) Triflupromazine

79. A benzodiazepine for emergency IV use in the control of status epilepticus in dogs
a) Midazolam
b) Estazolam
c) Triazolam
d) Diazepam

80. A novel benzodiazepine receptor agonist indicated for the treatment of insomnia
a) Lorazepam
b) Zolpidem
c) Chlordiazepoxide
d) Clorazepate

81. The drug that is used to control the manic phase of bipolar disorder
a) Lithium carbonate
b) Fluoxamine
c) Imipramine
d) Seligeline

82. The major opioid peptide derived from proopiomelanocortin
a) Dynorphin A
b) Enkephalins
c) β endorphins
d) OrphaninFQ

83. An opioid derivative used in combination with detomidine hydrochloride in horses to provide effective sedation and analgesia
a) Oxymorphone
b) Naloxone
c) Fentanyl
d) Butorphanol

84. Relieves skeletal muscle spasm by impairing depolarization induced calcium release from sarcoplasmic reticulum
a) Metoclopramide
b) Dantrolene
c) D-tubocurarine
d) Clonazepam

85. A $5HT_3$ receptor antagonist used to treat nausea and vomition
a) Bromocriptine
b) Tetanus toxin
c) Ondansetron
d) Alphaxolone

86. Is an anti- diabetic drug that blocks selectively the inward rectifying potassium channels
a) Vincristine
b) Amiloride
c) Sulfonylurea
d) Verapamil

87. Is a non selective irreversible MAO inhibitor
a) Nortriptyline
b) Moclobemide
c) Clomipramine
d) Pargyline

88. Is used to reverse benzodiazepine overdosage
a) Flumazenil
b) Reserpine
c) Promethazine
d) Droperidol

89. An antimuscarinic agent used for the treatment of Parkinson's disease
a) Promethazine
b) Droperidol
c) Bentropine
d) Reserpine

90. It is one of the safest of the tetracyclines for the treatment of extra renal infections in patients with renal failure
a) Tetracycline
b) Minocycline
c) Doxycycline
d) Oxytetracycline

91. The quantity of chemical that would not cause appreciable risk to the health of the person when it is consumed daily during the entire life span on the basis of all the facts known at that time is known as
a) ADI
b) NOAEL
c) Tolerance level
d) MRL

92. The antiprotozoal drug suramin sodium is used for the treatment of
a) Leishmaniasis
b) African trypanosomiasis
c) American trypanosomiasis
d) Babesiasis

93. The sulfonamide used as feed additive in swine and resulted in persistence of voilative residues
a) Sulfadimethoxine
b) Sulfamethoxazole
c) Sulfamethazine
d) Sulfaquinoxaline

94. The only antibacterial agent approved by USFDA for treatment of giardiasis
a) Metronidazole
b) Tinidazole
c) Furazolidone
d) Paromomycin

95. The macrolide antibiotic used to prevent congenital toxoplasmosis
a) Clindamycin
b) Erythromycin
c) Clarithromycin
d) Spiramycin

96. Drug used to treat the intestinal forms of amebiasis
a) Metronidazole
b) Diloxanide furoate
c) Nifurtimox
d) Chloroquine

97. An antibiotic approved for the therapy of visceral leishmaniasis
a) Clindamycin
b) Azithromycin
c) Spiramycin
d) Amphotericin B (lipid formulation)

98. The only cephalosporin that produced direct renal toxicity at therapeutic doses
a) Cephalothin
b) Cefoperazone
c) Cephaloridine
d) Cefazolin

99. Macrolide approved for the therapy of MAC
a) Erythromycin
b) Spiramycin
c) Clarithromycin
d) Oleandomycin

100. A napthoquinolone approved for the treatment of piroplasmosis
a) Decoquinate
b) Atovaquone
c) Buparvaquone
d) Buquinolate

101. A triazole antifungal agent used for the treatment of *Cryptococcal* meningitis
a) Gresiofulvin
b) Ketoconazole
c) Fluconazole
d) Amphotericin B

102. An anticoccidial approved for use in layers
a) Robenidine
b) Nicarbazin
c) Amprolium
d) Monensin

103. Drug of choice for arsenic poisoning
a) Ca diNa EDTA
b) Dimercaprol
c) Methylene Blue
d) Sodium thio sulphate

104. In swine, zearalenone produces
a) Nephrotoxicity
b) Vulval prolapse
c) Ototoxicty
d) Muscular dystrophy

105. The dose rate of atropine in organophosphorus poisoning
a) 0.2-0.5 mg/kg .B.W
b) 2-5 mg/kg B.W
c) 5-10 mg/kg B.W
d) 10-20 mg/kg B.W

106. Enzootic ataxia results due to deficient dietary intake of
a) Lead
b) Copper
c) Selenium
d) Arsenic

107. A potent cytotoxin which is the primary constituent of ant venom
a) Mellitin
b) Alpha latrotoxin
c) Bufagins
d) Formic acid

108. The neurotoxin present in cobra venom that blocks post synaptic receptor
a) Alpha latrotoxin
b) Alpha bungarotoxin
c) Batrachotoxin
d) Beta bungarotoxin

109. Poison that cause severe kidney damage
a) Rubratoxin
b) Coal tar
c) Ethylene glycol
d) Aflatoxin

110. The antiviral agent that inhibits the viral M2 protein ion channel
a) Ribavarin
b) Amantadine
c) Oseltamivir
d) Ganciclovir

111. An antineoplastic agent that has the potential to produce dose related nephrotoxicity
a) Tamoxifen
b) 6-mercaptopurine
c) Doxorubicin
d) Cisplatin

112. A labile neurotoxin elaborated by black widow spider
a) Bufotenin
b) Alpha latrotoxin
c) Beta bangarotoxin
d) Tetrdotoxin

113. The enzyme inhibited by fluoroacetate in the TCA cycle is
a) Succinic dehydrogenase
b) Fumarate reductase
c) Aconitase
d) Malic dehydrogenase

114. Signs and lesions of copper poisoning is observed in deficiency of
a) Mercury
b) Arsenic
c) Molybdenum
d) Lead

115. A poison that causes derangement of nervous function by marked stimulation
a) Selenium
b) Barbiturates
c) Strychnine
d) Paraquat

116. Oxalate rich plant is
a) Lantana camera
b) Hypericum perforatum
c) Beta vulgaris
d) Ipomoea

117. The universal antidote contains
a) Activated charcoal
b) MgO_2
c) Tannic acid
d) All the above

118. A poison that causes respiratory insufficiency by hindering oxygen uptake from pulmonary alveoli
a) CO
b) Chlorophenol
c) Cyanide
d) ANTU

119. Minamata disease is related to toxicity of
a) Cadmium
b) Copper
c) Methyl mercury
d) Lead

120. A synthetic antimicrobial agent with bactericidal activity
a) Sulfamethoxazole
b) Chloramphenicol
c) Clarithromycin
d) Enrofloxacin

121. The toxic effect Gray baby syndrome is produced by
a) Cephalosporins
b) Penicillin G
c) Chloramphenicol
d) Chlortetracycline

122. An antifungal agent elaborated by the soil actinomycete *Streptomyces nodosus*
a) Gresiofulvin
b) Nystatin
c) Flucytosine
d) Amphotericin B

123. An antibiotic that penetrates well through cell and achieve intracellular concentration that inhibit or kill the pathogens residing within cells
a) Sulphonamides
b) Penicillin G
c) Rifampin
d) Bacitracin

124. Concurrent administration of loop diuretics increases ototoxic effect of aminoglycisides by
a) Displacing the aminoglycosides from protein binding sites
b) Inhibiting liver microsomal enzymes and decreases its metabolism
c) Interfere with active transport system essential for the maintenance of ionic balance of endolymph
d) Increasing the absorption of aminoglycosides from GI tract

125. An antiretroviral drug that inhibits the enzyme HIV protease
a) Zidovudine
b) Lamivudine
c) Ritonavir
d) Efavirenz

126. For synergistic action, the most effective ratio of the minimum concentration of sulfamethoxazole and trimethoprim in plasma is
a) 5:1
b) 20:1
c) 1:5
d) 10:1

127. Local anesthetics act by interfering with the permeability of
a) Na^+ ions
b) K^+ ions
c) Cl^- ions
d) Mg ions

128. The alkaloid obtained from strychnos nux vomica is mainly a
a) General stimulant
b) Psychostimulant
c) Spinal stimulant
d) Respiratory stimulant

129. Phase I biotransformation reactions involve all except
a) Hydroxylation
b) Acetylation
c) Oxidation
d) Reduction

130. The principal targets of drug actions are
a) Ion channel
b) Receptors
c) Enzymes
d) All the above

131. Which is/ are not the characteristic (s) of the active transport of drug across the membrane
a) Selectivity and saturability
b) Competitive inhibition by congeners
c) No requirement of energy
d) All the above

132. Mydriasis at the end of surgical anaesthesia indicates
a) Loss of reflexes
b) Safe and reversible anesthetic effect
c) Overdose of anaesthesia
d) Loss of sensation

133. Enterohepatic circulation for a drug
a) Increases duration of action of drug
b) Increases rate of elimination
c) Increases rate of hepatic- biliary excretion
d) Is an alternative way of biotransformation in renal diseases

134. Duration of the action of penicillin is prolonged by
a) Inhibiting glomerular filtration
b) Inhibiting active tubular secretion
c) Urinary alkalinization
d) None of the above

135. Antagonist
a) Have a high efficacy
b) Have both intrinsic activity and affinity
c) Have zero efficacy
d) Have an intermediate efficacy

136. Intravenous administration
a) Is too slow for emergency use
b) Usually produces a slower response than does oral administration
c) Generally results in more precisely determined effects than does oral administration
d) Cannot be used with unconscious patients

137. Which of the following statement is incorrect?
a) Lipid soluble drugs are readily reabsorbed across mucous membrane
b) Acidic drugs are ionized to a greater extent in an acidic environment
c) Basic drugs are ionized to a greater extent in an acidic than in basic environment
d) In general most drugs are made more polar by metabolism

138. All of the following statements concerning antidiabetic agents are true except
a) Commercial insulin preparations are mostly of human origin
b) Hepatocytes,erythrocytes, leucocytes,adrenal medullary chromafin cells and brain cells do not require insulin to transport glucose.
c) Dogs are more likely than cats to develop insulin antibodies to porcine or human insulin preparations
d) Glipizide, a sulphonylurea has been used with some success to treat NIDD in cats

139. The drug that is preferred for the treatment of post partum hemorrhage
a) Oxytocin
b) Bromocriptine
c) Cloprostenol
d) Ergonovine

140. Chronic administration of a glucocorticoid may
a) Induce anemia
b) Increase amount of adipose tissue in body
c) Induce osteoporosis
d) Induce lymphocytosis

141. Use of a glucocorticoid is contraindicated in all the following conditions except
a) Diabetics mellitus
b) Corneal ulceration
c) Anaphylactic shock
d) Infection uncontrolled by antibodies

142. A β_2 receptor agonist used for uterine relaxation
a) Oxytocin
b) Ritodrine
c) Ergometrine
d) All the above

143. Most sensitive of the following animals to the action of xylazine is
a) Dog
b) Ruminants
c) Cat
d) Horses

144. The receptor concept of drug action was advocated by
a) Paul Ehrlich
b) J.N. Langley
c) H.H. Dale
d) S.W. Banting

145. One dopamine antagonist which will act as antiemetic and prokinetic drug
a) Cisapride
b) Metaclopramide
c) Xylazine
d) Ranitidine

146. Posology deals with
a) Dosage
b) Dosage forms
c) Source
d) Weights and measures

147. Opiate derivative approved by FDA for immobilization of wild and exotic animals
a) Xylaxine
b) Ketamine
c) Fentanyl
d) Etorphine

148. M1 receptor antagonist that suppress neural stimulation of acid production
a) Protripyline
b) Pirenzipine
c) Atropine
d) Omeprazole

149. An antihistaminic used for vertigo treatment
a) Terfenadine
b) Cinnarizine
c) Cetrizine
d) Promethazine

150. An antimineralo corticoid diuretic
a) Deoxycorticosterone
b) Aldosterone
c) Spiranolactone
d) Furosemide

151. The first hormone synthesized in the laboratory
a) Insulin
b) Thyroxine
c) Glucagon
d) Parathormone

152. A leukotriene having chemotactic properties
a) LTB_4
b) LTC_4
c) LTD_4
d) LTE_4

153. One long acting glucocorticoid is
a) Dexamethazone
b) Hydrocortisone
c) Triamcinolone
d) Cortisol

154. The thyroid hormone replacement compound of choice in all the species is generally
a) $L\text{-}T_3$
b) $L\text{-}T_4$
c) TSH
d) TRH

155. An antifungal agent that inhibit steroid synthesis is
a) Amphotercin
b) Griseofulvin
c) Ketoconazole
d) Clotrimazole

156. Side effect of long term glucocorticoid therapy can be dramatically reduced by
a) Daily therapy
b) Alternate Day Therapy
c) Weekly therapy
d) Monthly therapy

157. In the secretary granule insulin is complexed with
a) Ca^{++}
b) Zn^{++}
c) Fe^{++}
d) Cu^{++}

158. One of the commonly used nonsedative antihistaminic is
a) Chlorpheniramine
b) Cyclizine
c) Cetrizine
d) Promethazine

159. A suicide inhibitor of Betalactamase
a) Imipenem
b) Aztreonam
c) Clavulanic acid
d) Cloxacillin

160. Toxicity of chloramphenicol is due to the presence of
a) Dichloroacetyl group
b) P-nitro group
c) Alcoholic group
d) Azo group

161. An antihormone used in cancer therapy
a) Tamoxifen
b) Mitotane
c) Procarbazine
d) None of the above

162. Bacteria which can resist antibacterial activity of methenamine
a) E. coli
b) S. aureus
c) Pseudomonas
d) Proteus

163. Lower concentration of tetracycline chiefly affect
a) Gram +ve organism
b) Gram –ve organism
c) Both gram +ve and Gram –ve
d) None of the above

164. Acetylation of amino group is deficient in
a) Cat
b) Dog
c) Pig
d) Horse

165. Verapamil is a blocker of channels involving
a) Potassium
b) Sodium
c) Calcium
d) All the above

166. Sialistic means
a) Pellet implantation
b) Biodegradable implant
c) Non-biodegradable implant
d) Pessary

167. A drug used for the treatment of malignant hyperthermia is
a) d-tubocurarine
b) Mephenesin
c) Dartrolene
d) Glyceryl guacolate

168. A semi synthetic penicillin that is not a prodrug of ampicillin
a) Hetacillin
b) Oxacillin
c) Bacampicillin
d) Talampicillin

169. A sulponamide which is used for the treatment of burns
a) Sulphacetamide
b) Sulphadimidine
c) Sulphanilamide
d) Silver sulphadiazine

170. One of the following is a specific Alpha 2- blocker
a) Xylazine
b) Clonidine
c) Prazocine
d) Yohimbine

171. The receptors for acetyl choline is
a) Muscarinic& Nicotinic
b) Alpha 1 and 2
c) Beta 1 and 2
d) None of the above

172. One of the following is not a saline purgative
a) Magnesium sulphate
b) Sodium nitrate
c) Sodium sulphate
d) Sodium tartrate

173. The antidote of coumarine poisoning is
a) Cyanocobalamine
b) Menadion
c) Ascorbic acid
d) Glucose

174. One of the following drug prevent bacterial multiplication, not due to its oxidizing action
a) Potassium permanganate
b) Sodium perborate
c) Hydrogen peroxide
d) Sulphur- dioxide

175. The most abundant extra cellular cation in the body
a) Potassium
b) Calcium
c) Magnesium
d) None of the above

176. The following drug suppresses the cough directly
a) Potassium iodide
b) Ammonium carbonate
c) Dextromethorphan
d) All the above

177. Ephedrine is
a) An alkaloid
b) Bronchodilator
c) CNS stimulant
d) All the above

178. Cocaine and atropine have action on pupil of eye
a) Similar action
b) Opposite action
c) Different action
d) No action

179. The therapeutic dose of Intraval sodium in dog is
a) 20-30mg/kg i/v
b) 15-17mg/kg i/v
c) 20mg/kg i/m
d) None of the above

180. Chemically Oil of wintergreen is
a) Methyl salicylas
b) Phenyl salicylas
c) Ethyl salicylas
d) None of the above

181. Sodium salt of the following is a short acting barbiturate
a) Thiopentone
b) Phenobarbitone
c) Pentobarbitone
d) All the above

182. The following drug is a mood stabilizer
a) Lithium carbonate
b) Phenobarbitone
c) Chlorpromazine
d) All the above

183. The antidote of methyl alcohol is
a) Activated charcoal
b) Ethyl alcohol
c) Curd
d) Disulfiram

184. The common name of 3, 7 dimethyl xanthine is
a) Caffeine
b) Theophylline
c) Theobromine
d) None of the above

185. Nimesulide is a
a) Alpha 2 blocker
b) Cox 2 inhibitor
c) H2 Blocker
d) None of the above

186. Flumazenil is a specific antidote of
a) Phenobarbitone
b) Triflupromazine
c) Xylazine ketamine
d) None of the above

187. The specific antagonist of Morphine is
a) Bemigride
b) Yohimbine
c) Naloxon
d) Atropine

188. The mediator of Renshaw cell is
a) Glycine
b) GABA
c) Acetyle choline
d) Nor adrenaline

189. The following drug is antidiuretic only in diabetes insipidus
a) Theophyline
b) Atropine
c) Chlorothiazide
d) ADH

190. To protect from radiation toxicity one of the following coverings can be used
a) Lead
b) Copper
c) Iron
d) Silver

191. One of the following is a urinary sedative
a) Ethacrynic acid
b) Tr.Hyoscyamus
c) Paracetamol
d) All the above

192. The actual antagonist of aldosterone is
a) Spironolactone
b) Canrenone
c) Chlorothiazide
d) All the above

193. One of the following is having inverse relation with copper toxicity
a) Arsenic
b) Mercury
c) Molybdenum
d) None of the above

194. Cadmium prevents normal utilization of
a) Iron
b) Copper
c) Calcium
d) Zinc

195. In copper poisoning the kidney is called
a) Gun metal kidney
b) Blue coloured kidney
c) Metalic kidney
d) None of the above

196. The neuropeptide neurotransmitters located in the CNS
a) Enkephalin
b) Oxytocin
c) Substance P
d) All the above

197. The effect produced by xylazine
a) Analgesia
b) Convulsion
c) Antitussive
d) None of the above

198. The combination of drugs which causes pharmacological antagonism
a) Histamine & Epinephrine
b) Heparine & Protamine
c) Histamine & Pheniramine maleate
d) None of the above

199. The more water soluble drugs accumulate in
a) Liver & kidney
b) Brain
c) Bones
d) Serum or plasma

200. The major toxicity associated with the use of nitrous oxide during inhalation anaesthesia is
a) Explosion
b) Hypoxia
c) Hemolysis
d) Cardiac arrhythmia

201. Choral hydrate is not a satisfactory anaesthetics because of
a) Irritation on gastro intestinal mucus membrane
b) Low pain relieving power
c) Lower concentration in blood
d) Rapid inactivation

202. A non-addicting analgesia is produced by
a) Mepridine
b) Codeine
c) Pentozocine
d) Morphine

203. The transport mechanism which require energy
a) Passive diffusion
b) Filtration
c) Facilitated diffusion
d) None of the above

204. The half-life of a drug is the time taken for
a) To eliminate half the microbes causing disease
b) Excreting the drug completely from the body
c) To reduce one half of the drug concentration in the body
d) To enter the drug into the systemic circulation

205. Aspirin
a) Is eliminated more rapidly by dogs
b) Produces hypothermia on over dosage
c) Inhibits cyclooxygenase
d) Reduces visceral pain

206. The substance referred to as vagusstoff (vagus substance) was later identified as
a) Atropine
b) Acetylcholine
c) Epinephrine
d) Norepinephrine

207. An exogenous catecholamine
a) Epinorphine
b) Norepinephrine
c) Isoproterenol
d) Ephedrine

208. The major hormone released from adrenal medulla is
a) Dopamine
b) Cortisone
c) Epinephrine
d) Norepinephrine

209. Xylazine is against the receptor
a) Alpha $_1$
b) Alpha $_2$
c) Beta $_2$
d) Beta$_2$

210. The drug that inhibit the release of histamine
a) Betazole
b) Cemetidine
c) Pyrillamine
d) Cromolyn sodium?

211. Poloxalene relieves ruminant blot by
a) Stimulating eructation reflex
b) Inhibiting growth of gas forming bacteria
c) Altering surface tension of froth
d) Stimulating rumen motility

212. The route of administration of epinephrine for arresting bleeding is
a) Intravenous
b) Subcutaneous
c) Intramuscular
d) Tropical application at the site bleeding

213. The H_2 blocker
a) Ranitidine
b) Cimetidine
c) Burimamide
d) All mentioned

214. The antagonist of vitamin K
a) Dicumarol
b) Protamine
c) Heparine
d) Calcium

215. Water turnover in young animals is approximately
a) 25 ml/Kg/day
b) 75 ml/Kg/day
c) 130 ml/Kg/day
d) 200 ml/Kg/day

216. The poison selectively deposit in the hairs
a) Lead
b) Aldicarb
c) Arsenic
d) Malathion

217. The insecticide which is most resistant to environmental degradation
a) Malathion
b) Cypermethrin
c) Propoxur
d) DDT

218. The presence of "long rocker shaped hoof" is a characteristic of poisoning with
a) Copper
b) Selenium
c) Arsenic
d) Lead

219. The organophosphate that causes delayed neurotoxity
a) Parathion
b) EPN
c) Sarin
d) Dichlorvos

220. In swine "Zearalenone", a mycotoxin, produces
a) Nephrotoxicity b) Vulval prolapse
c) Ototoxicity d) Muscular dystrophy

221. Chronic copper poisoning is more prevalent in
a) Dog b) Pig
c) Chicken d) Sheep

222. Most important aflatoxin because of its toxicity and concentration in mouldy feed is
a) B_1 b) B_2
c) G_1 d) G_2

223. The enzyme inhibited by fluoroacetate in TCA cycle is
a) Malic dehydrogenase b) Aconitase
c) Succinic dehydrogenase d) Fumerate reductase

224. The toxic metal which form one of the trace elements
a) Arsenic b) Mercury
c) Selenium d) Rubedium

225. ALA-D is the sensitive indicator of poisoning with
a) Fluorine b) Lead
c) Selinium d) Organochlorine

226. Metronidazole is effective against?
a) Trichomoniasis b) Anaplasmosis
c) Babesiosis d) Trypanosomiasis

227. Beta-Lactamase inhibitor given along with Bbeta- lactam antibiotics is
a) Probenecid b) Cilastatin
c) Clavulanic acid d) All the above

228. The property that is not considered as demerit of streptomycin
a) Poor oral bioavailability b) Bactericidal action
c) Tendency to cause damage to 8th cranial nerve d) Prominently Gram negative activity

229. The most effective drug combination for the treatment of tuberculosis
a) Isoniazid and rifampin b) Streptomycin and ethambutol
c) Aminosalicylic acid and Cycloserine d) Pyrazinamide and ethionamide

230. The drug used in the treatment of nasal schistosomiasis
a) Tartar emetic b) Sodium Antimony tartrate
c) Trichlorphan d) All the above

231. The percent of Malathion is used as spray for the control of ectoparasite
a) 0. 5 b) 1.0
c) 2.0 d) 2.5

232. "Rose budding" is a toxic effect in pigs which is produced by
a) Erythromycin
b) Chloramphenicol
c) Tylosin
d) Spiramycin

233. A semisyntheticpenicillin that is not a pro-drug at ampicillin
a) Hetacillin
b) Oxacillin
c) Bacampicillin
d) Telampicillin

234. Combination of sulfonamides with trimethopim results in
a) Antagonistic effect
b) Additive effect
c) Synergistic effect
d) Potentiating effect

235. An antiseptic especially toxic to cats
a) Cresol
b) Cetrimide
c) Merbromin
d) Iodine

236. 'Water deprivation syndrome' is caused by
a) Nitrate
b) Chlorate
c) Sodium chloride
d) Sodium fluoride

237. Choline esterase reactivators are useful in the poisoning of
a) Organochlorines
b) Carbamates
c) Organophosphates
d) Pyrethroids

238. The mycotoxin which primarily affects the kidneys
a) Ochratoxin
b) Rubratoxin
c) Aflatoxin
d) Ototoxin

239. Dithiol-containing chelating agent that forms relatively non-toxic and easily excretable complex with arsenic is
a) Dimercaprol
b) Desferoxamine
c) Penicillamine
d) Calciumdisodium EDTA

240. A phytotoxin present in the castor plant
a) Nerin
b) Abrin
c) Ricin
d) Nicotine

241. Anemia is a constant finding in chronic poisoning with
a) DDT
b) Selenium
c) Lead
d) 2,4-D

242. The drug which is used for the elimination of adult heart worm
a) Dithiazanine iodide
b) Di-ethyl carbamazine
c) Thiacetarsamide
d) Nicarbazin

243. Cilastatin is to be used in urinary tract infection treated with
a) Nalidixic acid
b) Imipenem
c) Gentamicin
d) Furazolidone

244. An anthelmintic whose site of action is not the neuromuscular system is
a) Niclosamide
b) Levamisole
c) Piperazine
d) Pyrantel

245. The toxic effect "Gray Baby Syndrome" is produced by
a) Tetracycline
b) Chloramphenicol
c) Sulfadiazine
d) Oleandomycin

246. An anticoccidial drug that acts by inhibiting thiamine uptake is
a) Furazolidone
b) Nicarbazin
c) Amprolium
d) Sulfadimethoxine

247. The one which does not inhibit nematodal acetyl choline esterase(AchE) enzyme
a) Haloxon
b) Trichlorfon
c) Pyrantel
d) Rifampin

248. An antimicrobial agent that affects nucleic acid metabolism
a) Rifampin
b) Clindamycin
c) Polymyxin
d) Ketoconazole

249. Metronidazole is effective against
a) Trichomoniasis
b) Anaplasmosis
c) Babesiosis
d) Trypanosomiasis

250. Furosemide is administered to dogs at dose rate of
a) 1 mg/Kg
b) 5mg/Kg
c) 10 mg/Kg
d) 15 mg/Kg

251. HI – Histamine receptor blocker
a) Phentolamine
b) Metoprolol
c) Promethazine
d) Methacholine

252. The agent used for uterine relaxation
a) Isoxuprine
b) Ritodrine
c) Clenbuterol
d) All the above

253. H+, K+ ATP –ase inhibitor used in the treatment of peptic ulcers
a) Lansoprazole
b) Cimetidine
c) Misoprostol
d) Metoprolol

254. Rate of drug elimination is determined by
a) Degree of perfusion of eliminating organs
b) Activity of drugs metabolizing enzymes
c) Effeciency of renal excretion
d) All the above

255. Combination which can reverse the effect of droperidol fentanyl
a) Haloperidol and nalorphine
b) Yohimbine and naloxone
c) 4-aminopyridine and naloxone
d) All the above

280. The combination of drugs which give synergestic action
a) Na2SO4 + MgSO4 combination
b) Tetracycline + CaPO4
c) Sulfamethoxazole (B.static) + Trimethoprim (B. static)
d) ACh + Adrenaline Combination

281. Potentiation
a) Barbiturate + Alcohol
b) Na2SO4 + MgSO4
c) ACh + Physostigmine
d) Chloramphenicol + Penicillin

282. Lipid soluble drugs are absorbed from Lipoidal membranes in the
a) Ionized form
b) Non ionized form
c) Pinoccytosis
d) Active transport

283. Adrenaline is added to local anaesthetic to
a) Increases the rate of absorption of L.A
b) Increases the blood concentration of L.A.
c) Decrease the rate of absorption of L.A
d) Decreases the duration of action of L.A.

284. An index of safety of a drug
a) Efficacy
b) Potency
c) Slope
d) Affinity

285. The study of Biochemical and Physiological effects of drugs and their mechanism of action is referred to as
a) Pharmacokinetics
b) Pharmacodynamics
c) Pharmacotherapeutics
d) Chemotherapy

286. The species which exhibit the acquired resistance to atropine is
a) Dog
b) Rabbit
c) Cattle
d) Sheep

287. A cholinergic drug used in Ruminal Atony
a) Nor adrenaline
b) Carbachol
c) Ach
d) Methacholine

288. A short acting Mydriatic and a Cycloplegic drug used in Diagnostic Retinoscopy
a) Atropine sulphate
b) Hyoscine
c) Propantheline
d) Tropicamide

289. An OPC Anticholinesterase agent used as an Ectoparasiticidal agent
a) Malathion
b) Echothiopate
c) Parathion
d) Dichlorovos

290. A sedative and an Analgesic of choice for use in Horses
a) Acepromazine
b) Dipyrone
c) Detomidine
d) Trifluopromazine

256. NSAIDs like aspirin
a) Block platelet aggregation
b) Prevent TXA2 formation
c) Increase bleeding time
d) All the above

257. The one which is not a characteristics of active transport of drug across the membrane
a) Selectivity and saturability
b) Competitive inhibition by congeners
c) No requirement of energy
d) All the above

258. Phenylephrine is primarily a direct – acting sympathomimetic amine at
a) α 1 receptor
b) α2 receptor
c) β1 receptor
d) β 2 receptor

259. PGF2 α produced in the uterus is
a) Luteolytic hormone
b) An abortifacient
c) Used in synchronizing oestrus in farm animals
d) All the above

260. Bronchodilation is produced by
a) Salbutamol
b) Terbutaline
c) Aminophylline
d) All the above

261. The dose of magnesium sulphate for inducing purgation in cattle
a) 5 g
b) 50 g
c) 500 g
d) None of the above

262. Angiotensin converting enzyme is inhibited by
a) Captopril
b) Losartan
c) Nifedipine
d) All the above

263. Halothane should not be used in animals having history of
a) Malignant hyperthermia
b) Hepatic disfunction
c) Pregnancy
d) Nephritis

264. A non-narcotic analgesic
a) Hydromorphone
b) Xylazine
c) Butorphanol
d) Levallorphan

265. The depth or level of anesthesia is better controlled with
a) Dissociative agents
b) Injectable anesthetics
c) Volatile liquids and gases
d) All the above

266. Imidazole derivative used as an injectable anesthetic in pig
a) Alphaxalone
b) Metomidate
c) Minaxolone
d) All the above

267. Dissociative anaesthesia is characterized by
a) A stage of sedation
b) Catalepsy
c) Marked analgesia
d) All the above

268. An anesthetics with high blood solubility
a) Isoflurane and nitrous oxide
b) Methoxyflurane and ether
c) Halothane and nitrous oxide
d) All the above

269. In the presence of muscarinic blockade, nicotine receptor mediated sympathomimetic effect is evoked by the large dosage of
a) Epinephrine
b) Amphetamine
c) Acetylcholine
d) Isoproterenol

270. Which is not true with angiotesin II
a) Increased cardiac out put
b) Releases vasopressin
c) Potent vasodilator
d) Releases catecholamines from adrenal medulla

271. Diuretic which inhibits carbonic anhydrase
a) Chlorothiazide
b) Furosemide
c) Acetazolamide
d) All the above

272. Epinephrine increases the blood level of
a) Glucose
b) Free fatty acids
c) Lactic acid
d) All the above

273. The selective autonomic ganglion blocking agent is
a) Decamethonium
b) Pacuronium
c) Tetramethylammonium
d) Tetra ethylammonium

274. The agent which acts as gastrointestinal protectant is
a) Sodium bicarbonate
b) Kaolin
c) Castor oil
d) Potassium bicarbonate

275. The agent which cannot control diarrhoea is
a) Belladonna alkaloids
b) Carbachol
c) Opiates
d) All the above

276. Nifedipine blocks the channel involving
a) Sodium
b)Calcium
c) Potassium
d) Iron

277. The nasal decongestant is
a) Oxymetazoline
b) Oxotremorine
c) Tolazoline
d) all the above

278. The intra muscular pre-anesthetic dose of atropine sulphate in dog and cat is
a) 0.045 to 0.06 mg/Kg
b) 0.45 to 0.60 mg/Kg
c) 4.5 to 6.0 mg/Kg
d) 6.0 to 10 mg/Kg

279. A study on the effects of drugs on human beings and animals
a) Clinical Pharmacology
b) Therapeutics
c) Chemotherapy
d) Pharmacotherapeutics

KEY ANSWERS

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
b	d	c	b	b	c	a	c	a	c	a	b	c	a	a
16	17	18	19	20	21	22	23	24	25	26	27	28	29	30
d	b	d	c	c	c	b	b	c	b	b	a	d	d	b
31	32	33	34	35	36	37	38	39	40	41	42	43	44	45
c	d	c	d	b	b	b	b	c	b	c	b	a	b	b
46	47	48	49	50	51	52	53	54	55	56	57	58	59	60
c	d	a	b	d	c	a	b	b	d	b	a	c	d	a
61	62	63	64	65	66	67	68	69	70	71	72	73	74	75
c	b	a	a	b	c	d	d	d	c	b	c	a	c	d
76	77	78	79	80	81	82	83	84	85	86	87	88	89	90
b	d	c	d	b	a	c	d	b	c	c	d	a	c	c
91	92	93	94	95	96	97	98	99	100	101	102	103	104	105
a	b	c	c	d	b	d	c	c	c	c	c	b	b	a
106	107	108	109	110	111	112	113	114	115	116	117	118	119	120
b	d	d	c	b	d	b	c	c	c	c	d	d	c	d
121	122	123	124	125	126	127	128	129	130	131	132	133	134	135
c	d	c	c	c	b	a	c	b	d	c	c	a	b	c
136	137	138	139	140	141	142	143	144	145	146	147	148	149	150
c	b	a	d	c	c	b	b	b	b	a	d	b	b	c
151	152	153	154	155	156	157	158	159	160	161	162	163	164	165
b	a	a	b	c	b	b	c	c	b	a	d	a	b	c
166	167	168	169	170	171	172	173	174	175	176	177	178	179	180
c	c	b	d	d	a	b	b	d	d	c	d	a	b	a
181	182	183	184	185	186	187	188	189	190	191	192	193	194	195
c	a	b	c	b	d	c	a	c	a	b	b	c	d	a
196	197	198	199	200	201	202	203	204	205	206	207	208	209	210
d	a	c	d	b	b	b	d	c	c	b	d	c	b	d
211	212	213	214	215	216	217	218	219	220	221	222	223	224	225
c	d	d	a	c	c	d	b	c	b	d	a	b	c	b
226	227	228	229	230	231	232	233	234	235	236	237	238	239	240
a	c	b	a	a	a	c	b	c	a	c	c	a	a	c
241	242	243	244	245	246	247	248	249	250	251	252	253	254	255
c	b	b	a	b	c	c	a	a	a	c	d	a	d	c
256	257	258	259	260	261	262	263	264	265	266	267	268	269	270
d	c	a	d	d	c	a	a	b	c	b	d	b	c	c
271	272	273	274	275	276	277	278	279	280	281	282	283	284	285
c	d	d	b	b	b	a	a	a	c	c	b	c	c	b
286	287	288	289	290										
b	b	d	d	c										

II. Fill up the blanks:

1. The hereditary basis for differences in pharmacological response to a drug in a population is dealt under .....
2. The measure of how strongly a drug binds to a receptor binding site is called .....
3. Highly irritant drugs are generally administered by ..... route.
4. Pre-systemic metabolism of drugs is otherwise calld as .....
5. .....are non-nitrogenous plant constituents that produce an astringent effect.
6. A more gradual decrease in response to a drug, taking days or weeks to develop is called .....
7. Acidic drugs are generally binds with ..... in plasma.
8. Drugs that stimulate depressed respiratory cnter to produce increased respiratory exchange are known as.....
9. The hypnotic action of chloral hydrate is due to its metabolite namely .....
10. GABA is the principal ..... neurotransmitter in the central nervous system (CNS).
11. ..... is the principal neurotransmitter substance discharged at the sympathetic nerve terminal.
12. ..... is the precursor for synthesis of 5-HT.
13. ..... response is observed after intra-dermal administration of histamine.
14. ..... are the agents used to suppress cough reflex.
15. ..... is a synthetic catecholamine.
16. ..... adrenergic receptors (pre-synaptic) are involved in auto-regulation of nor-adrenaline release.
17. ..... enzyme is responsible for intra-neuronal degradation of catecholamine.
18. ..... channel (ion) blockers belongs to *Class IV* anti-arrhythmic agents.
19. ..... is a fat soluble vitamin having anti-oxidant properties.
20. ..... is a heparin antagonist.
21. Pre-systemic metabolism of drugs is otherwise referred as .....
22. Antagonists possess 'affinity' but not .....
23. Unionized, lipid soluble drug molecules are absorbed mostly by .....
24. Flavanoids are polyphenolic plant constituents having ..... properties.
25. ..... is the term employed to define loss of pharmacological response upon repeated exposure to a drug.
26. The time lag for the drug to reduce one-half of the original plasma concentration is called .....
27. If the 'therapeutic index' of a drug is 10, it indicates an LD_{50}:ED_{50} ratio of .....
28. Naloxone but not nolorphine is a true ..... antagonist.
29. Glucuronide formation, a mechanism of Phase-II drug metabolism is poor in .....
30. Aspartate and glutamate are the principal ..... neurotransmitters in the C.N.S.
31. Nor-epinephrine is primarily ..... receptor agonist.
32. ..... are the agents used to prevent fermentation in the rumen.
33. Atropine sulfate is a non-selective ..... receptor antagonist.
34. Endogenous 5-hydroxytryptamine (5-HT) is synthesized from dietary .....
35. Omeprazole is a ..... pump inhibitor.
36. Quinidine blocks ..... channel similar to locan anaesthetics.
37. ..... is a powerful vasodilator substance produced by endothelial cells.
38. Lactulose is a ..... purgative.
39. The prostaglandin (PG) involved in luteolysis is .....

40. ..... is very effective against all stages of flukes in cattle.
41. ..... is anti protozoan drug is effective against *Babesia bigemina* in cattle.
42. Sulfonamide sensitive bacteria are unable to utilize a performed source of.....
43. The tetracycline act by inhibiting ..... synthesis.
44. Erythromycin is a ..... group of antibiotic.
45. Fluoroquinolone act by inhibiting ..... enzyme.
46. Gentamicin is isolated from.....
47. The active moiety is the ..... in the penicillin molecule.
48. ..... cephalosporin is used by intramammary route as a broad spectrum for the treatment of bovine mastitis.
49. Nitrate toxicity is treated with .....
50. In carbon mono oxide poisoning, blood is cherry red in colour because it contains.....
51. ..... compounds are irreversible cholinesterase inhibitors.
52. Cyanides inhibit ..... enzyme.
53. Warfarin is used as .....
54. Antidote for lead poisoning is Dicalcium sodium .....
55. The lowest dose of a toxicant, which produced toxic effect in a living organism is called .....
56. Examples of zootoxins are .....
57. Bacteria sensitive to sulphonamide are unable to utilize a preformed source of
58. The quantitative measure of the sensitivity of a particular bacterium to a particular antibiotic is known as .....
59. Prophylactic administration of antimicrobial agents in controlling infectious disease is known as .....
60. An acid stable derivative of erythromycin that is better absorbed after oral administration is .....
61. Antibiotics used as antineoplastics include .....
62. Absorption of ..... an antifungal is increased by a diet rich in fat.
63. .....is the proteinaceous substance released from mammalian cells with the ability to cause other cells to resist a viral infection
64. The antibacterial agent that was isolated from the wound of a patient by name Tracy is .....
65. Toxins from plants are known as ..... and from fungus are known as .....
66. Bitter almond smell is an indication of ..... poisoning while, garlic smell is an indication of .....
67. Based on the period of exposure and severity of symptoms poisoning is classified as ..... poisoning
68. If a poison affects the offsprings is known as ..... and if it causes neoplasia it is known as .....
69. ..... is an example of anticoagulant rodenticide.
70. When will ANTU poisoning be high - in full stomach or in empty stomach .....
71. Name the metabolite of penicillin used as a chelating agent. .....
72. Name the toxic principle in oak. .....
73. Which poisoning would you suspect if there is bluish black kidney in post mortem?
74. Give an example for a poison that makes the haemoglobin incapable of carrying oxygen. .....
75. What is the actual toxic agent in urea poisoning?.....

76. Name one toxic principle from *Nerium oleander* .....
77. What is the other term given to intentional poisoning of animals? .....
78. The green part of potato contains a toxic principle. Name the toxic principle.....

KEY ANSWERS

1	**Pharmacogenetics**	2	**Affinity**
3	**Intravenous**	4	**First pass effect**
5	**Tanins**	6	**Tolerance**
7	**Albumin**	8	**Analeptics**
9	**Trichloroethanol**	10	**Inhibitory**
11	**Nor-epinephrine/nor-adrenaline**	12	**Tryptophan**
13	**Triple**	14	**Anti-tussives**
15	**Isoproterenol**	16	**Alpha-2**
17	**MAO (Monoamino oxidase)**	18	**Calcium (Ca^{2+})**
19	**Vitamin E**	20	**Protamine SO_4**
21	**First pass effect**	22	**Intrinsic activity**
23	**Passive diffusion.**	24	**Anti-oxidant**
25	**Tachyphylaxis**	26	**Half life**
27	**10:1**	28	**Opioid**
29	**Cat**	30	**Excitatory**
31	**Alpha**	32	**Antizymotics**
33	**Muscarinic**	34	**Tryptophan**
35	**Proton**	36	**Sodium**
37	**Nitric oxide**	38	**Osmotic**
39	**Prostaglandin F_{2x}**	40	**Triclabendazole**
41	**Diamine azeturate**	42	**Folic acid**
43	**Protein**	44	**Macrolide**
45	**DNA gyrase**	46	***Micromonospora purpurea***
47	**Penicilloic acid**	48	**Cephazolin**
49	**Methylene blue**	50	**Carboxy haemoglobin**
51	**Organophosphorus**	52	**Cytochrome oxidase**
53	**Rodenticide**	54	**EDTA**
55	**Poison/Toxin**	56	**Cobra and Wasp venom/Spider, Scorpion**
57	**Folic acid**	58	**Minimal inhibitory concentration**
59	**Chemoprophylaxis**	60	**Roxithromycin**
61	**Doxorubicin, bleomycin, adinomycin and mitomuycin C**	62	**Griseofulvin**
63	**Interferon**	64	**Bacitracin**
65	**Phytotoxins; mycotoxins**	66	**Cyanide; phosphorus**
67	**Acute, Sub acute and chronic**	68	**Teratogenic; carcinogenic**
69	**Warfarin**	70	**Full stomach**
71	**d- penicillamine**	72	**Oxalic acid**
73	**Copper**	74	**Nitrite**
75	**Ammonia**	76	**Nericide / oleandrocids**
77	**Malicious poisoning**	78	**Solanine**

12. O'Hara disease is transmitted to abattoir workers during the slaughter of
a) Cattle
b) Deer
c) Rabbit
d) Poultry

13. 'Blood splashing' is produced during
a) Stunning
b) Sticking
c) De-boning
d) Flaying

14. Ultimate pH of beef carcass is
a) 5.5
b) 6.5
c) 6.8
d) 7

15. Accessory spleens are found in
a) Cow
b) Horse
c) Poultry
d) Pig

16. Hot water supplied inside the abattoir should have a temperature of
a) 62°C
b) 82°C
c) 52°C
d) 72°C

17. 'Pasteurised ham' is
a) Cured ham
b) Canned ham
c) Irradiated ham
d) Cooked ham

18. The organ which is referred as 'Gut sweet bread'
a) Spleen
b) Liver
c) Pancreas
d) Kidney

19. The nematode which is transmitted from fishes to human being
a) *Diphyllobothrium latum*
b) *Diplogognoporus brauni*
c) Himasthala sp.
d) Herring worm disease

20. *Alkaligenes viscolactis* in milk causes
a) Ropiness
b) Red colouration
c) Curdling
d) Sweet curdling

21. Chemical agent capable of destroying most of the microorganisms and reduces the number to a safer level
a) Detergent
b) Sanitizer
c) Disinfectant
d) None of the above

22. Potential carcinogenic antimicrobial agent excreted through cow's milk
a) Penicillin
b) Sulphamethazine
c) Kanamycin
d) Ampicillin

23. First symptoms of milk borne botulism in man develop within
a) 1-6 hour
b) Instantaneously
c) 12-36 hours
d) 72-96 hours

24. Histamine poisoning in milk and cheese consumer is attributed to
a) *Lactobacilli & Lactococci* b) *E. coli & K. pneumoniae*
c) *Staphylococci & Streptococci* d) *E. coli & Staphylococci*

25. Chloramphenicol residues in milk and milk products produce in consumers
a) Arthritis b) Blindness
c) Aplastic anaemia d) Diabetes

26. Protozoan disease transmitted to man through milk
a) Toxoplasmosis b) Babesiosis
c) Theilariasis d) Leishmanisol

27. COB test is conducted on
a) Pasteurized milk b) Raw milk
c) Sterilized milk d) Reconstituted milk

28. Food poisoning in milk consumers by *B. cereus* is caused by
a) Emetic toxin b) Diarrhoeal toxin
c) Both a & b d) Endtoxin

29. Octonoic & deconoic fatty acids in milk are
a) Probiotics b) Antimicrobial
c) Anticarcinogenic d) Antifungal

30. In India the grading, marking and defining the quality of butter and ghee is done by
a) BIS b) AGMARK
c) PFA d) FDA

31. The bacteria associated with the production of "Bitty" cream because of its action on milk
a) *B. cereus* b) *S. lactis*
c) Brucella d) E.coli

32. *Streptococcus lactis* and *Lactobacillus casei* get inactivated at the lactic acid accumulation respectively beyond
a) 1% & 2% b) 2% & 3%
c) 4% & 5% d) 6% & 7%

33. The percent chloride content in abnormal milk is more than
a) 0.02 b) 14
c) 0.14 d) 0.2

34. The test recommended to detect dehydrogenase activity of bacteria in milk
a) MBRT b) ABRT
c) STERILITY TEST d) COB test

35. Titratable acidity of milk is
a) Natural acidity b) Developed acidity
c) Natural & developed acidity d) None

III. State the following as TRUE or FALSE:

1. Pharmacotherapy deals with action of drugs in normal animals or individuals.
2. Medicinal preparations intended for oral use need not be sterile.
3. Intraperitonial (*i.p.*) absorption of drugs is faster than intra-muscular (*i.m.*) route.
4. Alkaloids are soluble in water.
5. Carrier mediated transport of drugs occurs against the concentration gradient.
6. Signal transudation through ligand-gated ionic channels is faster than other mechanisms.
7. The metabolites of acetylation reaction are polar and water soluble.
8. Morphine SO_4 induce excitation in cats.
9. Xylazine HCl induced sedation can be reversed by β_2-blocker.
10. Barbiturates can be safely used for general anaesthesia in pregnant animals.
11. Pilocarpine nitrate is a mydriatic agent.
12. Clenbuterol is a β_2-specific adrenergic agonist.
13. Angiotensin converting enzyme inhibitors are used as anti-arrhythmic agents.
14. The action of hexamine is due to the release of glutaraldehyde under acidic pH.
15. Cardiac glycosides increase the force and rate of myocardial contractions.
16. Acetazolamide is a carbonic anhydrase inhibitor.
17. Clinically, osmotic diuretics are preferred in case of cerebral oedema.
18. Antacids containing aluminium salts alone may cause constipation.
19. Nitric oxide is a powerful vasoconstrictor substance produced by endothelial cells.
20. Ecbolics are those substances usesd to control post-partum bleeding.
21. Potency is inversely related to dose.
22. 'Specificity' can be defined as the ability of a drug to bring multiple pharmacological effects by occupying a single class of receptors.
23. Glycosides are soluble in water by virtue of sugar moiety present in them.
24. For most drugs half-life is dependent on the dose administered.
25. Partial agonists can exert only a sub-maximal response.
26. Competitive antagonism is non-reversible.
27. Barbiturates by-pass *Stage-II* of General anaesthesia.
28. Neuroleptic analgesia can be achievd by combination of a tranquilizer and a non-narcotic analgesic agent.
29. In addition to sedation, Xylazine HCI possesses analgesic and muscle relaxant properties.
30. Thermoregulation is controlled solely by autonomic nervous system.
31. Aldosterone is a powerful mineralocorticoid produced from bone.
32. Isoproterenol is a β_2-specific adrenergic agonist.
33. Heparin Na can be used as *in vivo* and *in vitro* anticoagulant.
34. Flutamide is an anti-androgenic compound.
35. Vitamin A, D, E and K are water insoluble.
36. Mesoprostol is a synthetic analogue of PGF_{2a}.
37. Acetylcholine (Ach) is not employed for clinical use.
38. Piperazine is a broad spectrum anthelmintic.
39. Ivermectin is effective against tapeworms.
40. Thiabendazole is a benzimidazole.
41. Rapidly growing bacteria are most susceptible to bactericidal effect of penicillins.
42. Of all the amino glycosides neomycin is safest drug for parental use.
43. Tubular secretions of beta lactam can be competitively inhibited by probenecid.

44. Tetracycline are contraindicatead in growing puppies and pregnant bitches.
45. Bleomycin is a antifungal agent.
46. Phenol is an disinfectant.
47. Ketoconazole is a topical antifungal antibiotic.
48. Belladona is toxic to rabbits.
49. Treatment with sodium nitrite should not be repeated in cyanide poisoning.
50. Cumulative poisons cause chronic toxicity.
51. Vomiting should be induced in all cases of poisoning.
52. Castor beans contain ricin.
53. Oximes are used in organophosphorus compounds toxicity.
54. Xenobiotics are more toxic to new born because blood brain barrier is fully developed at birth.
55. Pentavalent arsenic is more toxic than trivalent arsenic.
56. The organochlorine pesticides are generally termed as nerve poisons.

KEY ANSWERS

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
F	T	T	F	T	T	F	T	F	F	F	T	F	F	F
16	17	18	19	20	21	22	23	24	25	26	27	28	29	30
T	T	T	F	F	T	T	T	F	T	F	T	F	T	F
31	32	33	34	35	36	37	38	39	40	41	42	43	44	45
F	F	T	T	T	F	T	F	F	T	T	F	T	T	F
46	47	48	49	50	51	52	53	54	55	56				
T	F	F	F	T	F	T	T	F	F	T				

IV. Match the following:

I

a) Cytoplasmic receptors	1. Intestinal astringents
b) *Materia medica*	2. Phosphodiesterse inhibitors
c) Tannins	3. Intramuscular route
d) Xanthine alkaloids	4. Deficient in dogs
e) Depot preparations	5. Narcotic analgesic
f) Irritant drugs	6. Prevents Na^+ entry
g) Pethidine	7. Steroid hormones
h) Local anaesthetics	8. Medicinal substances
i) Acetylation	9. Phenothiazene tranquilizer
j) Acepromazine	10. Intravenous administration

Ans: **a) 7** **b) 8** **c) 1** **d) 2** **e) 3**
f) 10 **g) 5** **h) 6** **i) 4** **j) 9**

II

a) Nor-adrenaline	1. Cytoprotectant
b) Adrenaline	2. Saline purgative
c) Thyroid hormones	3. Aldosterone antagonist
d) Diethyl stilbestrol	4. Phosphodiesterase inhibitor
e) Sucralfate	5. Glaucoma
f) Magnesium SO_4	6. Immunosupression
g) Theophylline	7. Adrenergic nerve terminal
h) Spiranolactone	8. Non-steroidal estrogenic compound
i) Pilocarpine nitrate	9. Cytosolic-nuclear receptors
j) Corticostroids	10. Adrenal medulla

Ans: a) 7 b) 10 c) 9 d) 8 e) 1
f) 2 g) 4 h) 3 i) 5 j) 6

III

a. Dale	1. Carbohydrate moiety
b. L. Mayer Jones	2. Intravenous non-barbiturate anaesthetic
c. Glycosides	3. Poor in cats
d. Propofol	4. Dissociative anaesthetic
e. Elixires	5. Xanthine alkaloid
f. Celecoxib	6. Coined the term "*receptor*"
g. Caffeine	7. Volatile anesthetic
h. Glucuronyl transferase	8. Veterinary Pharmacology
i. Enflurane	9. COX_2-specific inhibitor
j. Phencyclidine HCl	10. Hydro-alcoholic medicinal preparations

Ans: a. 6 b. 8 c. 1 d. 2 e. 10
f. 9 g. 5 h. 3 i. 7 j. 4

IV

a. Digitalis glycosides	1. Irritant purgative
b. Cimetidine	2. Loop-acting diuretic
c. Ondancetron	3. Cholinesterase (Ach E) inhibitor
d. Neostigmine	4. ACE inhibitor
e. Captopril	5. Osmotic diuretic
f. Castor oil	6. H_2 – receptor blocker
g. Frusemide	7. Proton pump inhibitor
h. Omeprazole	8. Anti-estrogenic compound
i. Mannitol	9. 5-HT_3 receptor blocker
j. Tamoxifen citrate	10. Inhibit Na^+-K^+ ATPase

Ans: a. 10 b. 6 c. 9 d. 3 e. 4
f. 1 g. 2 h. 7 i. 5 j. 8

V

1. Bleomycin	a) Burns wounds
2. Closantel	b) Demodectic mange
3. Amitraz	c) Carcinomas
4. Silver sulfadiazine	d) Dermatomycosis
5. Ketoconazole	e) Beta lactamase inhibitor
6. Cloxacillin	f) Folic acid inhibitor
7. Trimethoprim	g) Fascioliasis
8. Hexamine	h) Urinary antiseptic
9. Streptomycin	i) Semisynthetic penicillin
10. Ampicillin	j) Nephrotoxicity

Ans: 1. c 2. g 3. b 4. a 5. d
6. e 7. f 8. h 9. j 10. i

VI

1. Bone sink	a) Methylene blue
2. Methanol	b) Hepatotoxic
3. Photosensitization	c) Veratrum plant
4. Oximes	d) Botulinium
5. Nitrite poisoning	e) Cholinestrase reactivator
6. Aflatoxin	f) Fluoride
7. Teratogenicity	g) Blindness
8. Bacterial toxin	h) Lantana
9. Sulfur oxide	i) EDTA
10. Lead	j) Air pollutant

Ans: 1. f 2. g 3. h 4. e 5. a
6. b 7. c 8. d 9. j 10. i

VII

1. Sulphonamides	a) Peptidoglycan
2. Ivermectin	b) Mycoplasma
3. Metronidazole	c) Anticestodal
4. Cyclophosphamide	d) Crystalluria
5. Tylosin	e) Neuromuscular blockade
6. Niclosamide	f) Heart worm
7. Chloramphenicol	g) Aminoglycoside
8. Penicillin	h) Alkylating agent
9. Levamisole	i)Microsomal enz. inhibition
10. Kanamycin	j) Anaerobic bacteria

Ans: 1. d 2. f 3. j 4. h 5. b 6. c 7. i 8. a 9. e 10. g

36. According to BIS, good raw milk should not reduce methylene blue colour during the period between
a) 3& 4h
b) 6 & 8h
c) 30-60 min
d) 8 & 10h

37. Pathogenic bacteria that survive & multiply in milk at 8°C
a) *L. monocytogenes & Y.enterocolitica*
b) *B.cereus & clostridium sporogenes*
c) Leuconostoc & S.lactis
d) Salmonella & Staphylococcus

38. The soluble proteins of the milk do not precipitate in the presence of ammonium sulphate
a) Sterilised milk
b) Raw milk
c) Pasteurised milk
d) Boiled milk

39. The process which is associated with the development of "Cabagey flavour" of milk
a) UHT
b) LTLT
c) HTST
d) Boiling milk

40. Milk borne, Haverhill fever is caused by
a) *Coxiella burnetii*
b) *Streptococcus pyogenes*
c) *Streptobacillus moniliformis*
d) *Streptococcus lactis*

41. L - P system consist of
a) Lactanin-Lactoferrin-phosphatase
b) Phosphatase-Lysine hydrogenase-Lactanin
c) Hydrogenperoxide-thiocyanate-Lactoperoxidase
d) None

42. In sterilized milk, the spore count should not be more than
a) 10/ml
b) 5/ml
c) 15/ml
d) 20/ml

43. According to BIS, Coliform count should be absent in pasteurized milk when diluted at the ratio of
a) 1:1000
b) 1:100
c) 1:10
d) 1:10000

44. Preslaughter CO_2 anesthesia is advocated for
a) Pigs
b) Cattle
c) Poultry
d) Goat

45. Kitten test is done to diagnose food poisoning due to
a) Coagulase
b) Enterotoxin
c) Erythrogenic toxin
d) Exotoxin

46. Blue spots in meat are due to
a) *Clostridium sporogenes*
b) *Cladosporium herbarum*
c) *Pseudomonas syncyanea*
d) *Clostridium botulinum*

47. Nitrosamines in meat are carcinogenic in the form of
a) N-hydroxy-N-fluorenyl-acetamide b) Nitrites
c) Peptides d) Nitrate

48. Indication of decomposition of meat after 24th hour of slaughter at
a) PH 6.0 b) PH 6.8 & above
c) PH 5.2 d) PH 5.6

49. *Sporotrichum carnis* causes in meat
a) Green spots b) Black spots
c) White spots d) Red spot

50. Boiling test on meat detects
a) Odour b) Colour
c) PH d) Flavour

51. Stunning is prohibited in
a) Halal method b) Jewish method
c) Jataka method d) Muslim method

52. Bone taint is
a) Bone cancer b) Superficial spoilage
c) Deep seated spoilage d) Chemical spoilage

53. Watery pork is due to
a) Decreased muscle PH b) Increased muscle PH
c) Erysipelothrix d) Increased water activity

54. Important aflotoxin involved in the intoxication of milk
a) B1 & B2 b) G1 & G2
c) B1 & G1 d) All the above

55. Bacteria that produces black colour in milk
a) *Micrococcus roseus* b) *Pseudomonas nigrificans*
c) *Serratia marcescens* d) *Staphylococcus aureus*

56. Lovibond comparator is used in
a) MBRT b) Turbidity test
c) RRT d) Boiling test

57. Botulism poisoning is common in
a) Canned milk products b) Sour milk
c) Raw milk d) Boiled milk

58. Scarlet fever due to infected milk is caused by
a) Erythrogenic toxin b) Enterotoxin
c) Exfoliative toxin d) None

59. Common milk borne infectious hepatitis is due to hepatitis virus
a) A
b) B
c) C
d) D

60. Principal sites of predilection for brucella in non pregnant cows are
a) Udder & supramammary lymph node
b) Mesenteric lymph node and tonsil
c) Uterus and intestinal tract
d) Hepatic lymph node

61. Animal parasite infective to man known to be excreted in cow's milk
a) Toxoplasma gondi
b) *Cysticercus cellulosae*
c) Ascaris ova
d) *Caenia saginata*

62. Infant milk food should not have standard plate count of more than
a) 50,000/g
b) 50/g
c) 50,0000/g
d) 5000/g

63. MBRT is conducted on
a) Pasteurised milk
b) Sterilised milk
c) Raw milk
d) Condensed milk

64. Leptospires are shed in the milk of
a) Cow and goat
b) Man
c) Man, cow and goat
d) None of the above

65. Brucella antibodies in milk are tested by
a) RRT
b) MBRT
c) ABRT
d) All the above

66. Organisms not excreted in the milk infected animals
a) *Bacillus anthracis*
b) *Toxoplasma gondi*
c) *Vibrio cholerae*
d) *Escherichea coli*

67. The microbiological limits incorporated in the law or regulation is called as
a) Standard
b) Specification
c) Guideline
d) Levels

68. The most common method of pasteurization of bulk milk among the following is
a) Batch
b) LTST
c) HTST
d) Vat type

69. Coliforms will cause this type of fermentation of milk
a) Homo-fermentation
b) Lacto-fermentation
c) Gas fermentation
d) Hetero-fermentation

70. A spore forming bacterial pathogen, which may cause either emetic syndrome or diarrhoeal syndrome in man is
a) *Campylobacter jejuni*
b) *Bacilllus cereus*
c) *E.coli*
d) Shigella

71. Pasteurisation of milk was started by
a) Louis Pasteur b) Robert koch
c) Soxhlet d) Perti

72. Production of acid from lactose in milk is started by
a) *Lactbacillus coagulans* b) *Streptococcus lactis*
c) *Streptococcus bovis* d) *Lactbacillus lactis*

73. Among the following, food intoxication is produced by
a) Staphylococcus b) Salmonella
c) Rota viruses d) Toxoplasma

74. The main source of bacteriophage among the following is
a) Whey b) Wash water
c) Handler d) Cream

75. If milk is stored at 40°C, there is more chance of getting infection with
a) Aeromonas b) Plesiomonas
c) Listeria d) Campylobacter

76. Milk stones contains
a) Milk solids b) Detergents
c) Milk fat d) All the above

77. Electrical stimulation reduces
a) Cold shortening b) Freezer burn
c) Bone taint d) None of these

78. Rickettsial disease transmitted to abattoir workers by aerosol
a) Psittacois b) Scrub typhus
c) Deer fly fever d) Q fever

79. Torrymeter is used on meat to detect
a) Spoilage b) Toughness
c) Bloom d) Juciness

80. Phosphorescence in meat indicates contact of meat with
a) Detergent b) Bile pigment
c) Fish d) Radiation

81. Iodine value of the fat is highest in
a) Cattle b) Horse
c) Pig d) Buffalo

82. 'Freezer burn' is a condition usually seen in
a) Hip muscles b) Shoulder muscles
c) Offals d) Brain

83. Mesophiles grow at a temperature
a) 25°C – 40°C
b) 0°C – 20°C
c) 25°C – 60°C
d) 30°C – 47°C

84. According to BIS, pasteurized milk should not have a SPC/ml more than
a) 10,000
b) 30,000
c) 2,00,000
d) 50,000

85. Coliform count per 0.01 ml should be absent in
a) Raw milk
b) Pasteurised milk
c) Sterilised milk
d) Boiled milk

86. Reduction of Methylene blue in MBRT in half an hour indicates the quality of milk as
a) Poor
b) Good
c) Fair
d) Bad

87. Resazurin test (RRT) is suitable for
a) Raw milk
b) Pasteurised milk
c) Sterilised milk
d) Boiled milk

88. Psychrophillic count in milk is done at
a) 7°C for 10 days
b) 37°C – 24 h
c) 5°C – 24 h
d) 30°C – 24 h

89. UHT milk can be kept room temperature without spoilage upto
a) 20-25 days
b) 24-48 h
c) 3 months
d) 45 days

90. Media used for the estimation of *Escherichia coli* in milk
a) EMB agar
b) EMB broth
c) MacConkey broth
d) MacConkey agar

91. "Foaming organs" in pigs is associated with
a) *Clostridium septicum*
b) *Pasteurella multocida*
c) *Listeria monocytogenes*
d) *Clostridium botulinum*

92. Watery pork is associated with
a) PSE
b) DFD
c) Cysticercosis
d) All the above

93. Nitrazene yellow test on meat is for measuring
a) pH
b) Bleeding efficiency
c) Sodium chloride content
d) Spoilage

94. Sulphur stinker is associated with
a) *Cl. nigrificans*
b) *C. renale*
c) *Actinomyces bovis*
d) *Clostridium septicum*

95. Drip is associated with
a) Frozen meat
b) *E. coli*
c) Curing
d) Chilled meat

96. Yellow fat disease in pigs is due to
a) Fish diet
b) Jaundice
c) Salmonellosis
d) Improper sticking

97. *Cladosporium h*erbarum causes in meat
a) Black spots
b) White spots
c) Black beef
d) Green spot

98. Whiskers in meat is caused by
a) Bacteria
b) Moulds
c) Protozoa
d) Yeast

99. Rancidity of meat may be due to hydrolysis or oxidation of fat by
a) H_2O_2 & Ozone
b) Light, O_2 & bacteria
c) Both a and b
d) Yeast and mould

100. Sarcocyst occurs most commonly in
a) Spleen
b) Liver
c) Skeletal muscle
d) Kidney

101. Veterinarian involved in B.C.G. Vaccine development
a) Gaston Roman
b) Guerin
c) Griffith Evans
d) All the above

102. Small pox officially eradicated world wide in
a) 1969
b) 1979
c) 1989
d) 1999

103. Algal zoonosis
a) Protothecosis
b) Paragonimiasis
c) Favus
d) None of the above

104. 'TORCH' test is associated with
a) Tuberculosis
b) Toxoplasmosis
c) Typhoid
d) Listeriosis

105. Tick-borne encephalitis is an example of metazoonosis type
a) II
b) III
c) IV
d) I

106. Cutaneous larva migrans is an example of
a) Sapro-anthropozoonosis
b) Sapro-amphixenosis
c) Sapro-meta-anthropozoonosis
d) Direct zoonosis

131. Casoni test is associated with
a) Hydatid disease
b) Anthrax
c) Yellow fever
d) Brucellosis

132. Air borne transmission of rabies is associated with
a) Mink
b) Skunk
c) Bat
d) Fox

133. Transplacental transmission from mother to baby occurs in
a) Q-fever
b) KFD
c) Toxoplasmosis
d) Anthrax

134. Vector involved in the transmission of KFD is
a) *Culex tarsalis*
b) *Haemogogus spegazzini*
c) *Haemophysalis spinigera*
d) None of the above

135. Arthropods are involved in the life cycles of
a) Cyclozoonoses
b) Metazoonoses
c) Saprozoonoses
d) Directo zoonoses

136. Metazoonosis requiring two vertebrate and one invertebrate hosts
a) Yellow fever
b) Clonorchiasis
c) Paragonimiasis
d) Rabies

137. Obligatory cyclozoonosis
a) Hydatidosis
b) Cysticercosis
c) Rabies
d) Salmonellosis

138. Diagnostic test associated with wool sorters disease
a) Dick test
b) Ascolis test
c) Shick test
d) ABRT

139. *Erysipetothrix rusiopathiae* causes in man
a) Diamond skin disease
b) Sodoku
c) Malignant pastule
d) Wool sorters disease

140. Visceral larva migrans is caused by
a) *Toxocara cati*
b) Microsporium
c) *Cryptosporidium parvum*
d) *Ancylostomum caninum*

141. Montenegro test is a skin test for distinguishing immune and non immune persons to
a) Leishmaniasis
b) Tuberculosis
c) Brucellosis
d) Anthrax

142. Animal involved in the life cycle of sylvatic yellow fever
a) Rat
b) Dog
c) Monkey
d) Cattle

143. Vaccine used in man against yellow fever
a) 17D
b) Strain 19
c) Sabin
d) Strain 19 BA

144. A Chlamydial infection in man
a) Actinomycosis
b) Nocardiasis
c) Parrot fever
d) None of the above

145. In electrical stunning of animals, "missed shock" is produced due to
a) Poorly positioned electrode
b) Low voltage electric current
c) High voltage electric current
d) Insufficient hydration of animal

146. The standard test which is an indicator of organic content of the sewage is
a) BOD
b) Resazurin test
c) MBRT
d) ABRT

147. Triple antigen protects children against
a) Wooping cough, diphtheria, tetanus
b) Cholera, diphtheria, tetanus
c) Cholera, wooping cough, T.B.
d) All the above

148. Bacteria in water are killed by the oligodynamic action of the silver ions in
a) Berkefeld filters
b) Katadyn filters
c) Pasteur chamberland filters
d) Chamberland filters

149. Hole in the ozone layer is attributed to the human production of two highly reactive substances
a) SO_2 and CO
b) Chlorine and Nitric acid
c) VU rays and Smog
d) Ammonia

150. Disinfecting action of chlorine is mainly due to
a) Hypochlorite ion
b) Hypochlorous acid
c) Free chlorine
d) None of the above

151. The effective chemical against droplet nuclei and dust is
a) Ammonia vapours
b) Triethylene glucol vapours
c) Formaldehyde vapours
d) Sulphurdioxide vapour

152. The drinking water should be moderately hard with the level of hardness at
a) Less than 1 (less than 50 mg/l)
b) 3-6 (150-300 mg/l)
c) 1-3 (50-150 mg/l)
d) 3-5 (150-250 mg/l)

153. The concentration of fluorine in drinking water regarded as optimum in India is
a) 0.05 – 0.1 PPM
b) 2.0 – 2.5 PPM
c) 0.5 – 0.8 PPM
d) 0.1 – 0.2 PPM

154. Airborne rickettisial disease
a) Jail fever
b) Scrub typus
c) Q-fever
d) Ornithosis

107. Darling disease is otherwise known as
a) Histoplasmosis
b) AIDS
c) Scarlet fever
d) Ornithosis

108. Non-obligatory cyclozoonosis
a) Hydatidosis
b) Cysticercosis
c) Yellow fever
d) Leptospirosis

109. Reservoir of KFD
a) Porcupines
b) Monkeys
c) Cattle
d) Pig

110. Zoonotic disease where the strauss test is not the choice of diagnosis
a) Glanders
b) Epidemic typhus
c) Typhoid
d) None of the above

111. Water acceptable to consumer should have nephelometric turbidity units at
a) < 5
b) < 0.05
c) 15
d) 5

112. Paralytic mussel poisoning in man is caused by
a) Algal toxins
b) Mycotoxins
c) Mercury
d) Aflatoxin

113. Biological enrichment of water by excessive fertilization may result in
a) Eutrophication
b) Biofertilisation
c) Organic enrichment
d) Microbial magnification

114. Alum removes from water
a) Organic matter
b) Bacteria
c) Iron bacteria
d) Suspended solids

115. Casual reading requires an illumination of
a) 25 Lux
b) 100 Lux
c) 750 Lux
d) 220 Lux

116. Health based guideline value of lead is
a) 0.01 mg/l
b) 0.001 mg/l
c) 0.0001 mg/l
d) 1 mg/l

117. Iron bacteria in water that clogs iron pipes
a) Gallionella
b) *S. faecalis*
c) Citrobacter
d) *Escherichia coli*

118. Caission disease is common in
a) Divers
b) Drivers
c) Drainage workers
d) Abattoir workers

119. Acceptable noice level in class rooms
a) 30-40 dB
b) 10-15 dB
c) 100-200 dB
d) 50-60 dB

120. Noice affects ear function more in the presence of
a) CO_2
b) N_2
c) CO
d) S_2

121. Soft water has
a) Corrosic action on lead pipes
b) Only traces of dissolved solids
c) Both a and b
d) None of the above

122. Well which taps water from above the first impervious layer in the ground is
a) Deep well
b) Bore well
c) Shallow well
d) Spring well

123. Addition of lime to water
a) Reduces total hardness
b) Increases magnesium content
c) Increases total hardness
d) None of the above

124. Malaria is an example for
a) Water promoted disease
b) Water borne disease
c) Water washed disease
d) Direct zoonosis

125. The set of engineering laws and principles involved in scientific management of animal wastes
a) Agronomy
b) Supronomy
c) Copronomy
d) All the above

126. A strong sewage has a BOD (mg/l) of
a) 100-200
b) 150-250
c) Above 300
d) Below 300

127. An example for a non ionizing radiation is
a) X-rays
b) Electrons
c) Infra red rays
d) Gamma rays

128. Device for measuring and administering gaseous chlorine to water supplies
a) Horrock's apparatus
b) Paterson's chloronome
c) Ventury meter
d) None of the above

129. An indicator of air pollution
a) Smoke index
b) Chlorine
c) H_2S
d) Sulphur dioxide

130. In Leptospirosis patients the organisms are seen in the blood during
a) I week
b) II week
c) III week
d) All the above

155. The stunning method in which the bleeding efficiency is more
a) Electrical stunning b) Water jet stunning
c) Carbon dioxide method of stunning d) Stunning with captive bolt pistol

156. Back washing is associated with
a) Slow sand filters b) Rapid sand filters
c) Both d) Biological filters

157. Coagulants used in the water purification
a) Bleaching powder and sodium hypochlorite
b) Alum & poly Aluminium chloride
c) Sodium thiosulphate & SO_2
d) Aluminimum hydroxide

158. The captive bolt pistol is not very effective in the stunning of
a) Sheep b) Calves
c) Sows d) All the above

159. The definitive host of *Echinococcus granulosus* is
a) Dog b) Cow
c) Goat d) None of the above

160. The symptoms like irregular temperature and nocturnal sweating is found in the infection of
a) Brucella b) Typhoid
c) Leptospira d) None of the above

161. Streptococcal B haemolytic organisms are responsible for
a) Scarlet fever b) Diphtheria
c) Malta fever d) None of the above

162. *Escherichia coli* ferments sugar and produce
a) Only acid b) Only gas
c) Both a & b d) None of the above

163. Prion is responsible for
a) Mad-cow syndrome b) Ebola disease
c) Merburg disease d) All of the above

164. Anthroponoses are transmitted from
a) Man to animal b) Animal to man
c) Between man and animal d) None of the above

165. Yellow fever is classified as
a) Cyclozoonoses b) Direct zoonoses
c) Saprozoonoses d) None of the above

166. Botulism associated with
a) Canned food b) Raw meat
c) Raw fish d) None of the above

167. *Paragonimus westermani* is a
a) Trematode b) Nematode
c) Cestode d) Protozoa

168. The retention period of chlorine during chlorination is
a) 30 min b) 60 min
c) 90 min d) None of the above

169. Excess chlorine could be removed by
a) Aluminium sulphate b) Calcium sulphate
c) Sulphur dioxide d) None of the above

170. The indicator bacteria for the recent faecal pollution of water is
a) Clostridium b) Streptococci
c) Escherichia d) Staphylococci

171. The MPN is the enumeration of
a) All bacteria b) All fungi
c) Living bacteria d) None of the above

172. Somatic effects of radiation is due to
a) Small doses received over long period of time
b) Small doses received over short period of time
c) Heavy doses received over short period of time
d) Heavy doses received over long period of time

173. Parathion is more persistent in
a) Dry soil b) Wet soil
c) None of the above d) Black soil

174. Deep wells where water rises above the level of ground water is known as
a) Step wells b) Artesian wells
c) Bore wells d) Shallow well

175. Drinking water should be
a) Soft water b) Moderately hard
c) Hard water d) None of the above

176. Free and saline ammonia in water indicates
a) Chemical pollution b) Organic pollution
c) Sewage contamination of recent origin d) Faecal pollution

177. An effective air bactericide against droplet nuclei and dust
a) Mechanical ventilation b) Formaldehyde
c) Triethylene glucol d) Acetal dehyde

178. Waste water which does not contain human excreta is termed
a) Dry flow b) Sullage
c) Sewage d) Sludge

179. Conifer leaves have been used to clean up
a) Chromium-6
b) H_2S
c) Organic matter
d) Inorganic matter

180. Salmonella survives longer in
a) Raw waste
b) Dilute waste water
c) Solid waste
d) Pure water

181. Anti knock agent in automobile fuel
a) NO_2
b) Asbestoes
c) Tetra ethyl lead
d) Mercury

182. Sabin-Feldman dye test is used in the diagnosis of
a) Tuberculosis
b) Brucellosis
c) Toxoplasmosis
d) Hydatidosis

183. Yellow fever is classified as
a) Type I Metazoonosis
b) Obligatory Cyclozoonosis
c) Type II Metazoonosis
d) Non-obligatory Cyclozoonosis

184. Type III bite by a rabid dog needs the cell culture vaccination of
a) Full course
b) Only 3 doses (0, 7, 14 days)
c) Full course with antiserum
d) None of the above

185. Animal involved in transmission of Tanapox virus is
a) Buffalo
b) Cow
c) Monkey
d) Rat

186. Widely used coagulant in mechanical filter is
a) Sodium hypochlorite
b) Alum
c) Calcium hypochlorite
d) Lime

187. Main source of atmospheric radiation is
a) Natural
b) Industrial
c) From nuclear reactors
d) Automobiles

188. The quantity of water required for bacteriological examination of water is
a) 1.5 lit
b) 400 ml
c) 1 lit
d) 200 ml

189. Instrument which can indicate the direction of wind is
a) Anemometer
b) Wind vane
c) Barometer
d) Manometer

190. The metal mimics calcium and is deposited in bone
a) Arsenic
b) Methylmercury
c) Chromium
d) Lead

191. The distance between the level of water in the trap and lowest point of the upper cancave surface of the trap.
a) Water seal b) Trap water
c) Closet water d) Open water

192. Low free ammonia and high albuminoid ammonia in watr indicates
a) Decomposing animal matter b) Industrial contamination
c) Vegetable matter d) All the above

193. Which accounts for the greatest amount of air pollution?
a) Industry b) Generating electric power
c) Waste incineration d) Transportation

194. Organism which utilizes plastic is
a) *Pseudomonas putida* b) *Zooglea ramigera*
c) *Alealigenes eutophus* d) *Microsporum faeni*

195. Tuberculin test is a
a) Precipitation test b) Agglutination
c) Skin test d) None

196. Anisakiasis is a
a) Fish borne zoonosis b) Vector borne zoonosis
c) Soil borne zoonosis d) All

197. Giardiasis is an example of
a) Anthrapozoonosis b) Zooanthroponoses
c) Ambixenosis d) All

198. The larval stages of chrysomyia species causes
a) Cutaneous larva migrans b) Visceral larva migrans
c) Myiasis d) Cercarial dermatitis

199. Milk ring test is done to detect
a) Mastitis b) Brucellosis
c) Q-fever d) All

200. Identification of Negribodies is for the diagnosis of
a) Rift valley fever b) Rabies
c) Yellow fever d) Cowpox

201. First zoonotic disease discussed in the world health assembly
a) Rabies b) Anthrax
c) Plague d) All the above

202. Veterinary pathologist at Punjab Veterinary College who got infected while autopsying a glandered horse & underwent 45 operations including amputation of his arm
a) S.P. Goel b) S.H. Gaiger
c) K. Srinivasan d) S.K. Singh

203. Direct zoonoses
a) Yellow fever, plague
b) Rabies, echinococcosis
c) Rabies, Brucellosis
d) None of the above

204. Zoonotic disease not reported in India
a) Swine fever
b) Chikungunya fever
c) West Nile fever
d) Plague

205. The crucial factor for the transmission of rabies virus from animal to man
a) Salivary invasion
b) Cerebral invasion
c) Muscular invasion
d) All the above

206. Zoonosis due to animal organ transplantation
a) Xenozoonosis
b) Anthropozoonosis
c) Amphixenosis
d) Metazoonosis

207. Anti-rabies vaccine preferred for man
a) Vero cell line
b) HDCV
c) N TV
d) Duck embryo vaccine

208. Zoonotic disease frequently associated with bird and bat habitat
a) Rabies
b) Anisakiasis
c) Histoplasmosis
d) Leptospirosis

209. Natural cycle of Endemic typhus occurs in
a) Cattle
b) Man
c) Rodents
d) Monkey

210. The condition of the animal which receives judgement of "slaughter may be delayed" at ante-mortem inspection is
a) Excited animals
b) Localized infection
c) Treated with illegal drugs for growth promotion
d) Moribund animals

211. A water borne disease
a) Cholera
b) Scarlet fever
c) TB
d) Brucellosis

212. Organic lead poisoning affects
a) CNS
b) GIT
c) Kidney
d) Bone marrow

213. Live attenuated vaccine
a) Oral Polio
b) Rabies
c) Tetanus
d) Anthrax

214. Natural Alumino-Silicate is known as
a) Permutit
b) Water coagulant
c) Zeolite
d) None of the above

215. The greatest source of radiation exposure to general population of the present time is
a) Nuclear b) TV set
c) Medical & dental X-rays d) Radiation

216. Zoogleal layer is an essential part of
a) Septic tank b) Sedimentation tank
c) Trickling filters d) Slow sand filter

217. Suitable system of disposal of effluent in place where the soil has very high ground water table
a) Septic tank b) Deep pit system
c) Evapotranspiration d) All the above

218. Amoebic meningo encephalitis is otherwise known as
a) Amoebiasis b) Giardiasis
c) Naegleriasis d) Amoebic dysentry

219. The term Zoonoses includes
a) Animal-Soil-Man infection b) Animal-Vector-Man infection
c) Animal-Animal-Man infection d) All

220. In Taeniasis, man is
a) Incidental host b) Definitive host
c) Dead end host d) Alternate host

221. Sterne's vaccine for anthrax in humans is
a) A virulent live spore vaccine b) Live attenuated spore vaccine
c) Formalin killed vaccine d) Toxoid vaccine

222. Microcyling of anthrax spores in soil refers to
a) Survival b) Transfer
c) Propagation d) None

223. The role of sheep, cattle and man in the life cycle of hydatidosis is
a) Reservoirs b) Carriers
c) Intermediate hosts d) Obligate hosts

224. The vector of JE in India is
a) *Aedes aegypti* b) *Culex vishnuii*
c) *Anopheles sp.* d) All

225. The favourable breeding sites for *Aedes aegypti* is
a) Rice fields b) Sewage
c) Fresh/clean waters d) All

226. KFD is a
a) Metazoonoses b) Saprozoonoses
c) Cyclozoonoses d) None

227. KFD virus circulates naturally for its transmission in nature among
a) Cattle and buffaloes
b) Sheep and goats
c) Shrews and rodents
d) Monkeys and man

228. Dengue fever is primarily a disease of
a) Monkeys
b) Humans
c) Domestic animals
d) All

229. TB, an emerging zoonoses of immunocompromised individuals results from mainly
a) *Myco bovis*
b) *Myco. Paratuberculosis*
c) *Myco avium*
d) *Myco. Tuberculosis*

230. *Tatera indica, Xenopsylla cheopis, Pulex irritans, Rattus rattus and Bandicoota bengaliensis* are part of the life cycle of
a) Borreliosis
b) Plague
c) Scrub typhus
d) Spotted fevers

231. Candy's filter is an example for
a) Gravity type
b) Biological filter
c) Pressure filter
d) Wet filter

232. The optimum period of storage of water for purification is
a) 15-20 days
b) 10-14 days
c) 20-30 days
d) None of the above

233. Staphylococcus food poisoning results when food is contaminated with
a) Enterotoxins
b) Endotoxin
c) Organisms
d) Spores

234. Man acts as a dead end host in
a) *Taenia saginata*
b) *Taenia solium*
c) *Echinococcus granulosus*
d) None of the above

235. Nocturnal sweating with fever is found in
a) Brucellosis
b) Anthrax
c) Leptospirosis
d) None of the above

236. Flatcher media is commonly used for the diagnosis of
a) Plague
b) Yeast
c) Leptospira
d) None of the above

237. Haverhill fever is caused by
a) *Borrelia burgdorferri*
b) *Rickettsia akari*
c) *Streptobacillus moniliforms*
d) All of the above

238. *Borrelia recurrentis* is a
a) Micrococci
b) Cocco-bacili
c) Spirochete
d) Bacilli

239. Fish is the intermediate host of
a) *Diphylobothrium latum* b) *Fasciola hepatica*
c) *Echinococcus granulosus* d) *Multiceps multiceps*

240. The disease most likely to spread by slurry is
a) Tuberculosis b) Brucellosis
c) Q-fever d) Salmonellosis

241. When wind blows through a room it is called
a) Diffusion b) Perflation
c) Aspiration d) Ventillation

242. A moderate dispersion of minute droplets in atmosphere is known as
a) Droplet b) Dust
c) Mist d) Smoke

243. Which is the measurement for the effect of ionizing radiation
a) Rad b) Curie
c) Becquerels d) Roentgen

244. The name given for biotechnologically developed bacteria which can utilize crude oil is
a) Petrophagia b) Super bug
c) Oil terminator d) Wonder trap

245. Sabin-Feldman dye test is used in the diagnosis of
a) Tuberculosis b) Brucellosis
c) Toxoplasmosis d) Hydatidosis

246. Important bacterial disease transmitted by dog bite
a) Cytocapnophaga b) Rabies
c) Lyme disease d) Plague

247. Nine mile fever in man is caused by
a) *Coxiella burnetii* b) Brucella-abortus
c) S-suis d) None of the above

248. Zoonotic diseases transmitted by human faeces
a) Cysticercosis b) Hydatidosis
c) Anthrax d) Small pox

249. 'Ring-a-Ring-a-Roses....' The nursery rhyme is originated from a zoonotic disease
a) Plague b) Small pox
c) Ring worm d) Guinea worm disease

250. "Yellow Rain" is associated with a biological warfare agent
a) Trichothecene mycotoxin b) SO_2
c) Anthrax spores d) CO

251. Saxitoxin is associated with a condition in man
a) Shigellosis
b) Salmonellosis
c) Paralytic shell fish poisoning
d) Streptococcosis

252. Women of child bearing age who work with cats should discuss with their physician about
a) TB
b) Cat scratch disease
c) Toxoplasmosis
d) Hydatid disease

253. Non-human insulin used in man are derived from
a) Primates
b) Horses
c) Pigs & Cattle
d) Birds

254. NICD has its origin to control/eradicate
a) Small pox
b) Rabies
c) Malaria
d) Dengue

255. Increase in food borne diseases in man is attributed to ignoring the principles of
a) BIS
b) HACCP
c) PFA
d) ISO

256. Leprosy is an example of
a) Anthropo Zoonosis
b) Zooanthroponosis
c) Direct Zoonosis
d) Indirect zoonosis

257. Pathognomonic symptom of chronic brucellosis in man
a) Fever
b) Arthritis
c) Abortion
d) Back ache

258. In the abattoir, the knives used for cutting the anthrax infected animal tissues must be disinfected with
a) 1% hot sodium hydroxide solution
b) 3% hot sodium hydroxide solution
c) 5% formaldehyde
d) 10% formaldehyde

259. The most common form of anthrax in man
a) Intestinal
b) Cutaneous
c) Inhalational
d) Nervous

260. Vaccine strain used for man to protect against JE
a) Yokohama
b) Nakayama
c) 17D
d) Hokaido

261. Principal hosts for *T. spiralis*
a) Pig, Man & Dog
b) Pig, Man & Rat
c) Pig, Cattle & Sheep
d) Pig, goat, dog

262. The judgement earned by a poultry carcass which shows localized lesions or contamination not affecting the health of the rest of meat is
a) Partially condemned
b) Conditionally approved
c) Unfit for human consumption
d) Passed for human consumption

263. Dairy man's itch is caused by
a) Sarcoptes
b) Trycophyton
c) M. blane
d) Taenia

264. Zagreb schedule of rabies vaccination in man refers to intra muscular vaccination regimen
a) 2-1-1
b) 2-2-2
c) 1-1-1-1-1-1
d) 3-1-2-3

265. Skin test conducted to diagnose *Lymphogranuloma venerium*, a chlamydial disease in man
a) Frei test
b) Antons test
c) Casoni test
d) Mallien test

266. For the soft scalding of poultry, the temperature of scalding tank water is
a) 50 -51°C
b) 56-58°C
c) 53-55°C
d) 55to60°C

267. The crucial factor for the transmission of Rabies in man
a) Salivary invasion
b) Cerebral invasion
c) Muscular invasion
d) Inhalation

268. Vector involved in sylvatic Yellow fever
a) Haemogogus
b) *Aedes aegypti*
c) *Haemophysalis spinigera*
d) Culex

269. Hide porter's disease
a) Erysipeloid
b) Anthrax
c) Brucellosis
d) Tuberculosis

270. Nitrosamines in meat are carcinogenic in the form of
a) Nitrite
b) Nitrate
c) Nitric oxide
d) Peptides

271. Mosquito borne zoonotic disease
a) J.E., Typhoid, Q-fever
b) Yellow fever, J.E., Dengue
c) Plague, Kalaazar, KFD
d) TB, Brucellosis, Salmonellosis

272. Anti-rabies vaccine should be stored at between
a) -5° to 20°C
b) 2° to 8°C
c) 25° to 30°C
d) 20-30 °C

273. Cholangiocarcinoma in man is attributed to
a) Brucellosis
b) Clonorchiasis
c) Leptospirosis
d) Trichinellosis

274. Blue spots in meat are due to
a) *Clostridium sporogenes*
b) *Cladosporium herbarum*
c) *Pseudomonas syncyanea*
d) *Pseudomonas fragi*

275. A vagabond fever
a) *Bacillus anthracis* b) *Borrelia recurrentis*
c) *Brucella abortus* d) *Bacillus subtilis*

276. The most common condition associated with chronic toxoplasmosis in man
a) Abortion b) Chorio retinitis
c) Arthritis d) Glaucoma

277. Both animals and man are reservoirs and primary hosts for the agent in the zoonotic life cycle
a) Zoo-anthroponosis b) Amphixenosis
c) Anthropozoonosis d) None of the above

278. Transmission of disease from animals to man both by aerosols and tick bites
a) Typhus fever b) Q-fever
c) Scrub typhus d) Spotted fever

279. Space occupying zoonotic disease in man
a) Hydatidosis b) Yellow fever
c) Lyme disease d) Dengue

280. Multiple organ infectious zoonotic disease
a) Listeriosis b) Rabies
c) Brucellosis d) Q. fever

281. Infectious disease associated with "bad-air"
a) Malaria b) Byssinosis
c) KFD d) JE

282. Disease common in communities where there is accumulation of solid wastes especially discarded containers associated with *Aedes aegypti*
a) Dengue fever b) Undulant fever
c) Spotted fever d) Typhus fever

283. The most common form of filariasis, a mosquito borne disease, in Kerala
a) Brogian filariasis b) Bancroftian filariasis
c) Loa Loa filariasis d) None of the above

284. Magnitude of BOD of sewage in related to
a) Amount of organic matters b) Amount of inorganic matters
c) Number of pathogenic bacteria d) All of the above

285. Plumbism in man
a) Lead poisoning b) Nitrate poisoning
c) Mercury poisoning d) Arsenic poisoning

286. Bore well water is
a) Much hard b) Moderately hard
c) Soft d) Very soft

287. The chemical that increases 6 times more than the normal in SMOG
a) SO_2 b) CO_2
c) NO_2 b) CO

288. Main source of Nitrogen oxide, an indoor pollutant
a) Gas cooker, Cigarettes b) Electrical arcing, Building material
c) Stove, Resin products d) All of the above

289. Ionizing radiation with radio isotopes such as cobalt 60 & phosphorous 32 & X-rays effects mainly
a) Bone marrow b) Liver
c) Heart d) Spleen

290. High Nitrate content in drinking water leads to a condition in children
a) Methaemoglobinaemia b) Oxyhaemoglobinanemia
c) Diarrhea d) Fever

291. Farmers lung
a) Hay/grain/Micrococci b) Hay/grain/*S.pyogenes*
c) Hay/grain/*Micropolyspora faeni* d) All of the above

292. Eradication of disease refers to
a) Killing of infected animals b) Vaccination
c) Root out d) Segregation of healthy animals

293. Organ first affected by rigor mortis is
a) Heart b) Lung
c) Skeletal muscle d) Diaphragm

294. Gut sweet bread is
a) Lung b) Spleen
c) Liver d) None of the above

295. Drinking water should be moderately hard with level of hardness at
a) 300-500 mg/l b) 150-300 mg/l
c) 50-150 mg/l d) 200-300mg/l

296. Presumptive coliform test on water sample is based on the estimation of MPN of
a) Coliform/100ml b) E.coli/100ml
c) Pathogenic bacteria/100ml d) Enterococci/100ml

297. 'Heat Island' phenomenon of cities is associated with increased
a) N_2 b) O_2
c) CO_2 d) CH_4

298. Anacrobic digestion of sewage takes place in
a) Activated Sludge treatment b) Trickling filters
c) Septic tank d) All of the above

299. X-ray technicians should be protected against occupational radiation hazards by wearing aprons of
a) Aluminium
b) Copper
c) Lead
d) None of the above

300. Ozonization of water has
a) High residual effect
b) No residual effect
c) Moderate residual effect
d) None of the above

301. Air embolism is common in
a) High altitudes
b) Low altitudes
c) Plains
d) None of the above

302. Pulmonary oedema is common in
a) Low altitudes
b) High altitudes
c) Plains
d) None of the above

303. Ultimate pH of beef carcass is
a) 5.5
b) 6.0
c) 7.0
d) 8.5

304. At birth (0-3 days) child is given
a) DPT, BCG, MMR
b) BCG, OPV, Hepatitis B
c) BCG, HIB, Chicken pox
d) None of the above

305. Scarlet fever in children is associated with
a) Haemolysins
b) Erythrogenic toxin
c) Enterotoxins
d) None of the above

306. Hot fermentation process of disposal of wastes is otherwise known as
a) Delhi method
b) Bangalore method
c) Mumbai method
d) None of the above

307. Nuisance bacteria in drinbking water
a) *E-coli*
b) *S. pyogenes*
c) Iron bacteria
d) Salmonella

308. The sanitizer recommended to clean the rubber teat cups of milking machine is
a) Hypochlorite 2½ Oz per gallon of water
b) quaternary ammonium compounds 200-400 ppm
c) Lye 0.4 to 0.5%
d) All the above

309. The staphylococcal enterotoxin associated with toxic shock syndrome is
a) A
b) C1
c) D
d) F

310. When the principle of soil percolation is not used, the following method of effluent disposal provides better method
a) Septic tank treatment
b) Sea disposal
c) Evapo transportation
d) None of the above

311. The best method of large scale purification of water
a) $KMno_4$
b) Ozozination
c) Chlorination
d) Reverse osmosis

312. Primary host for chicken pox is
a) Chicken
b) Cattle
c) Man
d) Monkeys

313. *Naegleria gruberi* causes a water borne disease in man known as
a) Giardiasis
b) Amoebiasis
c) Amoebic menningo encephalitis
d) None of the above

314. Blasting red lead paint causes in man
a) Farmer's lung
b) Bagassosis
c) Minuteman diseases
d) None of the above

315. NEERI is located at
a) New Delhi
b) Mumbai
c) Nagpur
d) Kochi

316. The remote faecal pollution of water is accounted by the presence of
a) *E. coli*
b) Faecal *streptococci*
c) Clostridium
d) All of the above

317. The biological oxidation demand of water is more in the presence of
a) Enteric pathogen
b) Hepatitis virus
c) Faecal contamination
d) More organic matter

318. Rat normally pollute the environment through their urine containing microbes like
a) Leptospira
b) Borellia
c) Trepanoma
d) Staphylococci

319. The effect of low altitude atmospheric pressure is
a) Insomnia
b) Impaired vision
c) Diguria
d) Air embolism

320. The point at which free chlorine begins to appear is known as
a) Chlorine point
b) Break point
c) Low point
d) All of the above

321. The rickettsial organism which causes trench fever in man is
a) *R. Conorii*
b) *R. Quintana*
c) *R .akari*
d) *R.canada*

322. The most important vector associated with the transmission of Japanese encephalitis virus to swine is
a) *Culex tritaeniorrhynchus* b) *Culex aegypti*
c) *Culex cedecei* d) *Culex delpontei*

323. In the transmission of Rabies, bat act as
a) Reservoir host b) Carrier
c) Vector d) Definitive host

324. Transovarial transmission of *Chlamidia psittaci* occurs in
a) Chicken b) Turkey
c) Duck d) Pigeon

325. The most important animal reservoir for human infection with *Helicobacter pylori* is
a) Cat b) Swine
c) Birds d) Primate

326. Cigarette smoke ties up with smokers Hb
a) 5-15% b) 0-4%
c) 17-25% d) 16-20%

327. Softening of water is recommended when the hardness exceeds
a) 350 mg/l b) 300 mg/l
c) 400 mg/l d) 200 mg/l

328. The presence of spores of *Clostridium perfringens* in natural water and the absence of coliforms suggest that contamination occurred at
a) Very recent time b) Remote time
c) No contamination occurred d) None of the above

329. Silo fillers disease is caused by
a) Allergic reaqction to silage b) Gases found in old silages
c) Oxides of nitrogen in freshly filled silages d) Pesticides in silages

330. The minimum recommended concentration of free chlorine to be present in chlorinated water for a period of one hour is
a) 1.0 mg/l b) 0.5 mg/l
c) 5 mg/l d) 0,05 mg/l

331. The agent which causes human milk born Crohn' s disease is
a) *Mycobacterium paratuberculosis* b) *Brucella melitensis*
c) *Yersinia enterocolitica* d) *Mycobacterium tuberculosis*

332. The bacterial organism which produces a thermolabile toxin leading to food poisoning and affecting the nervous system
a) *Clostridium perfringens* b) *Clostridium botulinum*
c) *Staphylococcus aureus* d) *Escherichia coli*

333. Organism not excreted in the milk of infected animals
a) *Bacillus anthracis* b) *Toxoplasma gondi*
c) *Vibrio cholera* d) *Brucella ovis*

334. Dehydrogenase activity of bacteria in milk is tested by
a) MBRT b) ABRT
c) Sterility test d) RBPT

335. The test used to distinguish icteric change in meat from its normal yellow color
a) Acid malachite green test b) Remington and Fourier test
c) Vandenberg test d) Fouchets reagent

336. Postmortem judgement of the carcass with sexual odour
a) Total Condemnation b) Inferior
c) Approved d) Delayed slaughter

337. Minimum period of rest given to animals at lairage is
a) 3 hrs b) 4 hrs
c) 6 hrs d) 24 hrs

338. Freezer burn is a condition usually seen in
a) Hip muscle b) Shoulder muscle
c) Offals d) Brain

339. Electrical stimulation reduces
a) Cold shortening b) Freezer burn
c) Bone taint d) None of the above

340. Abnormal milk has chloride content more than
a) 0.02% b) 14%
c) 0.14% d) none of the above

341. Milkborne Haverhill fever is caused by
a) *Coxiella burnetti* b) *Streptococcus pyogenes*
c) *Streptobacillus moniliformis* d) All of the above

342. UHT milk can be stored at room temperature without spoilage upto
a) 20-25 days b) 24-48hrs
c) 3 months d) 40-60 days

343. Sulphur stinker in meat is associated with
a) *Cl. Nigrificans* b) *Clostridium renale*
c) *Actinomyces bovis* d) Pseudomonas

344. Nitrazene yellow test on meat is to measure
a) Bleeding efficiency b) pH
c) Sodium chloride d) Time of death

345. Veterinarian involved in BCG vaccine development
a) Griffith Evans
b) Gaston Ramon
c) Guerin
d) None of the above

346. Darling disease is also known as
a) Scarlet fever
b) Pure fever
c) Histoplasmosis
d) Scarlet fever

347. Acceptable noise level in class room
a) 30-40dB
b) 10-15dB
c) 100-200dB
d) 5-10dB

348. Caission disease is common in
a) Drivers
b) Divers
c) Pilots
d) Drainage workers

349. Iron bacteria that clogs iron pipes
a) Citrobacter
b) *S. fecalis*
c) Gallionella
d) None of the above

350. Soft water has
a) Corrosive action on lead pipes
b) Only traces of dissolved solids
c) Both a and b
d) None of the above

351. An example for a non ionizing radiation is
a) X-rays
b) Electrons
c) Infra red rays
d) Gamma rays

352. Casoni's test is associated with
a) Yellow fever
b) Anthrax
c) Hydatid disease
d) Undulant fever

353. The indicator bacteria for recent faecal pollution of water is
a) Clostridium
b) Escherichia
c) Streptococci
d) Staphylococci

354. Yellow fever is classified as
a) Type I metazoonoses
b) Obligatoru cyclozoonoses
c) Type II metazoonoses
d) Non obligatory cyclozoonoses

355. *Rickettsia typhi* causes
a) Endemic typhus
b) Scrub typhus
c) Thyphoid
d) All

356. Zoonoses due to animal organ transplantation
a) Organo zoonoses
b) Xenozoonoses
c) Amphixenosis
d) Transplantozoonoses

357. Natural Aluminosilicate is known as
a) Permutit
b) Zeolite
c) Coagulant
d)Bleach

358. Accessory spleens are found in
a) Cattle
b) Horse
c) Poultry
d) Pig

359. The organ referred to as Gut Sweet Bread is
a) Pancreas
b) Spleen
c) Kidney
d) Liver

360. Diaphoresis and echymoses in man is a characteristic feature of
a) Anthrax
b) JE
c) Dengue
d) Leptospirosis

361. Kysanur forest disease is classified as
a) Metazoonoses
b) Sparozoonoses
c) Cyclozoonoses
d) None of the above

362. Primary host for chiocken pox is
a) Man
b) Chicken
c) Birds
d) Cattle

363. The one which is not an antimicrobial substance present in fresh raw milk is
a) Lactoferrin
b) Lactanin
c) Lipase
d) Lysozyme

364. The main source of bacteriophage among the following is
a) Whey
b) Wash water
c) Handler
d) Cream

365. Cold sterilization in milk industry is associated with
a) Lactanins
b) Lactoferrins
c) Lactoperoxidase
d) Lysozyme

366. Organism is used as pathogenic index organism for the perfect pasteurization
a) *Coxiella burnetti*
b) *Mycobacterium tuberculosis*
c) *Brucella abortus*
d) *Bacillus cereus*

367. Any point or procedure in a food system when control can be exercised and a hazard can be minimized or prevented is referred to as
a) Critical limit
b) Hazard
c) Critical control point
d) Control point

368. Milk borne haver hill fever is caused by
a) Brucella
b) Streptobacillus
c) Listeria
d) Yersinia

369. A spore forming bacterial pathogen, which may cause either emetic syndrome or diarrhoeal syndrome in man is
a) *Campylobacter jejuni* b) *Bacillus cereus*
c) *E. coli* d) Shigella

370. Lactoferrin content is high in the milk of
a) Cow b) Buffalo
c) Human d) None of these

371. The bacterial organism which is associated with toxic infections in man through the consumption of milk and its products
a) *Staphylococcus aureus* b) *Clostridium botulinum*
c) *Enterobacter aerogenes* d) *Clostridium perfringens*

372. The bacteria responsible for ropy fermentation is
a) *Alkaligenes viscolactis* b) *Enterobacter aerogenes*
c) *Streptococcus cremoxis* d) All of these

373. In RRT on milk, Resazurin dye is reduced to
a) Formazan b) Tetrazolium
c) Resorufin d) Leucoform

374. In man immunoglobulin concentration in colostrums is
a) 50 mg/ml b) 150 mg/ml
c) 100 mg/ml d) 50 mg/100 ml

375. The range of normal pyruvate content of milk is
a) 0.5- 1.5 mg/l b) 0.1- 1.1 mg/l
c) 0.2- 3.5 mg/l d) 0.2- 2.5 mg/l

376. The range of residual concentration of chlorine in milk is
a) 0.3- 1.5 mg/l b) 0.8- 2.3 mg/l
c) 0.2- 3.5 mg/l d) 0.2- 4.5 mg/l

377. The organism responsible for Bitty cream in milk is
a) *Alkaligenes viscolactis* b) *Enterobacter aerogenes*
c) *Streptococcus cremoxis* d) *Bacillus cereus*

378. Toxic shock syndrome is caused by
a) *Staphylococcus aureus* b) *Clostridium botulinum*
c) *Enterobacter aerogenes* d) *Clostridium perfringens*

379. Apparent acidity of milk is
a) 0.5- 0.35 % of lactic acid b) 0.1- 1.1 % of lactic acid
c) 0.13- 0.15 % of lactic acid d) 0.2- 0.25 % of lactic acid

380. Lysozyme content in human milk is higher than that in bovine milk by
a) 1000 times b) 2000 times
c) 3000 times d) 4000 times

381. Temperature at which bacteriophage production is induced
a) 35 ^{0} C
b) 55 ^{0} C
c) 45 ^{0} C
d) 65 ^{0} C

382. The organism used for the preparation of blue veined cheese is
a) *Lactobacillus cremoris*
b) *Enterobacter aerogenes*
c) *Streptococcus cremoxis*
d) *Penicillium roqueforti*

383. The intoxication causes double vision and respiratory failure
a) *Staphylococcus aureus*
b) *Clostridium botulinum*
c) *Enterobacter aerogenes*
d) *Clostridium perfringens*

384. Species of lactobacillus used for the preparation of Yakult is
a) *Lactobacilluc brevis*
b) *Lactobacilluc casei*
c) *Lactobacilluc plantarum*
d) *Lactobacilluc lactis*

385. The temperature of water for udder washing should always be below
a) 35 ^{0} C
b) 55 ^{0} C
c) 45 ^{0} C
d) 65 ^{0} C

386. The antimicrobial enzyme abundant in cow milk but absent in human milk is
a) Lactoperoxidase
b) Lactanin
c) Lipase
d) Lysozyme

387. The antimicrobial factor abundant in human milk but absent in cow milk is
a) Lactoperoxidase
b) Lactanin
c) Bifidous factor
d) Lysozyme

388. FAO is located at
a) Geneva
b) France
c) Paris
d) Rome

389. The test used to distinguish icteric change from normal yellow colour
a) Bilirubin test
b) Remington and Fowrie test
c) Malachite green test
d) Nitrazine yellow test

390. Preslaughter withdrawal time to be given in a penicillin treated animal is
a) 6 days
b) 9 days
c) 10 days
d) 4 d

391. Freezing point of meat is
a) 1 to 1.5°C
b) -2 to -2.5°C
c) -1 to -1.5°C
d) 0.5 to1.5°C

392. Hay Odour in egg is produced by
a) Pseudomonas
b) *Enterobacter cloacae*
c) Nitrobacter
d) *Proteus vulgaris*

393. Ultimate pH of meat is
a) 5.4-5.7 b) 6.8- 7.0
c) 4.7-5.0 d) 5.1-5.3

394. Deer meat is called
a) Carabeef b) Chevalin
c) Venison d) Chevon

395. In slaughter house inspection area should have a light intensity of
a) 220 lux b) 540 lux
c) 110 lux d) 330 lux

396. A 24 hr bruise appears
a) Watery b) Dark coloured
c) Rusty orange d) Red and haemorrhagic

397. In abattoir effluent treatment, the materials remains in primary sedimentation tank for
a) 4-6 h b) 2-3h
c) 6-8h d) 9-10h

398. Regulatory protein seen in Z line is
a) Alpha actinin b) Beta actinin
c) Myosin d) Tropomyosi

399. The act of killing for food in jewish slaughter is called
a) Schochit b) Schechita
c) Kosher d) Halal

400. Sticky textured meat condition is seen commonly in
a) Cattle b) Goat
c) Sheep d) Pi

401. The percentage of Alpha actinin in myofibrillar protein
a) 4-5% b) 2-2.5%
c) 4-4.5% d) 2-3%

402. The pH falls to in PSE condition
a) 6.5-6.8 b) 5.4-5.5
c) 7-7.2 d) 6.8-7.0

403. The stunning method in which the bleeding efficiency is more
a) Electrical stunning b) Water jet stunning
c) Carbon dioxide method of stunning d) Stunning with captive bolt pistol

404. Rigor mortis of the carcass is dependent only on the availability of
a) ADP b) ATP
c) AMP d) pH

405. The ICMSF recommended that the total viable count of meat at 35°C should be
a) Less than 10^5/g
b) Less than 10^6/g
c) Less than 10^7/g
d) Less than 10^8/g

406. Length of the pithing rod should not be more than
a) 0.5 m
b) 0.7 m
c) 0.6 m
d) None of the above

407. The mould which causes white spot on meat is
a) *Cladosporium herbarum*
b) *Cladosporium butryi*
c) *Sporotrichum species*
d) *Aspergillus flavus*

408. Animal suspected of being treated recently with antibiotics receive an ante- mortem judgement of
a) Animals should be slaughtered but may need a special detailed post-mortem examination
b) Stock should be segregated for slaughter under special conditions
c) Slaughter may be delayed
d) Animal may progress for normal slaughter

409. The meat considered fit for consumption of Jews is called
a) Kosher
b) Terefa
c) Shochet
d) Chalef

410. Ham Taint is produced by
a) *Cladosporium herbarum*
b) *Cladosporium butryi*
c) *Sporotrichum species*
d) *Chlostridium sporogenes*

411. Intermuscular fat deposition is called
a) Marbling
b) Seam fat
c) Tallow
d) KKCF

412. The term 'lights' is another term used for
a) Kidney
b) Spleen
c) Heart
d) Lungs

413. Zooanthroponoses are transmitted from
a) Man to animal
b) Animal to man
c) Between man and animal
d) None of the above

414. The most important vector which is associated with the transmission of Japanese B encephalitis virus to swine is
a) *Culex tritaeniorrhynchus*
b) *Culex aegypti*
c) *Culex cedecei*
d) *Culex delpontei*

415. Paragonimiosis belong to the class of zoonoses
a) Metazoonoses subtype I
b) Metazoonoses subtype II
c) Metazoonoses subtype III
d) Metazoonoses subtype IV

416. The main vector of the etiological agent of dengue is
a) *Aedes albopictus* b) *Aedes scutellari*
c) *Aedes aegypti* d) *Aedes africanus*

417. The cestode parasite which produce cysticercosis in man and pig is
a) *Taenia solium* b) *Taenia saginata*
c) *Diphyllobothrium latum* d) *Spirometra mansoni*

418. The principal animal, which play a very important role as mixing vessel in Bird flu transmission is
a) Horse b) Cattle
c) Duck d) Pig

419. The most serious complication of diphyllobothriasis in man is
a) Mechanical obstruction of the intestine b) Anorexia
c) Loss of feeling in the extremities d) Megaloblastic anaemia

420. The disease, which is classified as anthropozoonoses
a) Staphylococcal infection b) Visceral larva migrans
c) Diphtheria d) Streptococcal infection

421. Localised chronic form of intestinal anthrax is seen in
a) Cattle b) Dogs
c) Pigs d) Sheep

422. The symptoms of jaundice is found in the infection of
a) Brucella b) Typhoid
c) Leptospira d) None of the above

423. Transovarian transmission is grouped under
a) Cyclozoonoses b) Saprozoonoses
c) Direct zoonoses d) Metazoonoses type IV

424. Botulism type E. toxin is associated with
a) Beef b) Plants
c) Fishes d) None of the above

425. Sabin – Feldman dye test is used in the diagnosis of
a) Tuberculosis b) Brucellosis
c) Toxoplasmosis d) Hyadtidosis

426. Yellow fever is classified as
a) Type I Metazoonoses b) Obligatory Cyclozonnoses
c) Type II Metazoonoses d) Non - Obligatory Cyclozonnoses

427. Example of Rickettsial disease mainly affecting abattoir workers
a) *Q. fever* b) Typhoid
c) Chlamydiosis d) Rickettsial pox

428. The disease seen commonly in peoples visiting caves
a) Brucella
b) Typhoid
c) Histoplasmosis
d) None of the above

429. Scratches with oozing of blood is classified under .....exposure in case of rabies
a) Class I
b) Class II
c) Class III
d) None of the above

430. OIE is located at
a) Geneva
b) France
c) Paris
d) Rome

431. The commensal agent in buccal cavity of dogs responsible for multi organ disease in man is
a) Rochalima henselae
b) Brucellosis
c) Capnocytophaga
d) Herpes virus

432. Guinea worm is transmitted by
a) *Aedes albopictus*
b) Water
c) Ticks
d) Mite

433. Kanagawa test is used in the identification of
a) Brucellosis
b) Typhoid
c) Vibriosis
d) Listeriosis

434. Sabin Feldman dye test is used for the diagnosis of
a) Toxoplasmosis
b) Typhoid
c) Histoplasmosis
d) Vibriosis

435. Suppurative lesion produced by zoophilic Microsporum canis is called
a) Buboes
b) Kerion
c) Abscess
d) Axion

436. Chlorine demand of water is measured using
a) Chlorinometer
b) Horrock's Apparatus
c) Salinometer
d) Hygrometer

437. The process of enrichment of lakes is called
a) Organic supplementation
b) Zootrophication
c) Eutrophication
d) Biological supplementation

438. The heart of the slow sand filter
a) Zoogleal layer
b) Eutrophic layer
c) Phytogleal layer
d) Filtered layer

439. The rate of filtration of rapid sand filter is
a) 0.1-0.4 $m^3/m^2/hr$
b) 0.5-5.0 $m^3/m^2/hr$
c) 2-10 $m^3/m^2/hr$
d) 5-15$m^3/m^2/hr$

440. Permutit is a complex of sodium with
a) Al & silicates
b) Al & carbonates
c) Mg & silicates
d) Mg & cabonates

441. Slow sand filter is cleaned by
a) Scrubing
b) Spraying
c) Backwashing
d) Scraping

442. Disease due to inhalation of coal dust
a) Baggassosis
b) Black lung disease
c) Asbestosis
d) Byssinosis

443. The one used for emergency disinfection of water
a) Iodine
b) Chlorine
c) UV radiation
d) Potassium permanganate

444. Percentage of available chlorine in Bleaching powder
a) 35%
b) 30%
c) 33%
d) 50%

445. The psycho acoustic index of loudness
a) Hertz
b) Decibel
c) Phon
d) Octaves

446. Maximum acceptable limit of arsenic in drinking water is
a) 0.5mg/l
b) 0.05mg/l
c) 0.1mg/l
d) 0.01mg/l

447. Radiation sickness develop by exposure to a radiation of
a) 500 Roentgen for 24 h
b) 250 Roentgen for 24h
c) 250 Roentgen for 12h
d) 500 Roentgen for 12h

448. That which is indicative of the presence of lead in water
a) *Abramis brama*
b) *Fontinalis antiptretica*
c) *Patoamogaton petinatus*
d) *Cymbella*

449. Iron bacteria that clogs iron pipes
a) Gallionella
b) Nitrobacter
c) Bacillus
d) Pseudomonas

450. Bacteria in water are killed by the oligodynamic action of silver ions in filter
a) Katadyn
b) Patersons
c) Porcelain
d) Chamberland

451. 1 mEq/l of hardness producing ion is equal to .....Calcium carbonate in one litre of water
a) 100mg
b) 75mg
c) 50mg
d) 60mg

452. A system for aerobic biological treatment of fats in sewage is
a) Biomaster G
b) Biolift
c) Biostyr
d) Biofor

453. Black dust which may be acidic in nature
a) Smoke
b) Smog
c) Fog
d) Smut

454. Juvenile hormones used in pest control
a) Ecdysons
b) Terpenoids
c) Pheromones
d) Cortisones

455. Exposure to noise pollution at this level may rupture the tympanic membrane and cause permanent hearing loss
a) 160dB
b) 180dB
c) 150dB
d) 200dB

456. WHO standards for coliform in Water distribution system is
a) <100cfu/ml
b) <10cfu/100ml
c) <3cfu/100ml
d) <30cfu/ml

457. Example of a water washed disease
a) Japanese encephalitis
b) Scabies
c) Dengue
d) Yellow fever

458. That which influences the activity of animal and plant life processes
a) Atmosphere
b) Stratosphere
c) Lithosphere
d) Hydrosphere

459. The BOD of untreated domestic sewage (strong) is
a) 100mg/l
b) 1000mg/l
c) 3000mg/l
d) 300mg/l

460. Somatic effects of radiation is due to
a) Small doses received over long periods of time
b) Small doses received over short period of time
c) Heavy doses received over short periods of time
d) Heavy doses received over long periods of time

461. Water from under ground sources is known as
a) Lentic water
b) Juvenile water
c) Lotic
d) None of the above

462. The upper most rigid structure of the earth consisting of rock and soil is called
a) Lithosphere
b) Stratosphere
c) Biosphere
d) Atmosphere

463. Instrument used to measure the accumulated exposure to radiation is
a) Radiograph
b) Radiometer
c) Dosimeter
d) All of the above

464. In human, exposure to noise is not permissible at
a) 85dB
b) 20,000dB
c) 60dB
d) 115 dB

465. Athlete's foot is contracted from swimming pool on exposure to
a) Trichophyton
b) Schistosoma
c) Cryptosporidium
d) High dose of chlorine

466. Black lung disease is caused by
a) Carbon particles
b) Cotton dust
c) Silica
d) Smoking

467. Waste water which do not contain human excreta
a) Sewage
b) Shud
c) Sullage
d) Smut

468. Hard water has a pH of
a) >8
b) 7
c) <5
d) None of the above

469. The BOD level of strong sewage is
a) 600
b) 300
c) 100
d) 500

470. In the atmosphere ozone level is thickest at
a) Equator
b) North pole
c) South pole
d) Equal in all areas

471. Radiation effect is usually manifested by acute irritation of
a) Gastrointestinal tract
b) Skin
c) Nervous system
d) Respiratory system

472. An eg.of iron bacteria
a) Gallionella
b) Salmonella
c) Listeria
d) Clostridium

473. Smoke index is expressed as
a) Phon
b) Coh
c) Decibel
d) Hertz

474. Brown air cities are as a result of
a) Photochemical reaction
b) Air pollution
c) Phytoremediation
d) Industrial pollution

475. Normal air contains oxygen a the level of
a) 20.93
b) 21.93
c) 19.93
d) 19.95

476. Muscular hemorrhages in electrically stunned animals can be reduced considerably by
a) Immediate bleeding
b) Prior resting
c) Correct stunning
d) All the above

477. The desired red color of cured meat is produced by the pigment
a) Metmyoglobin
b) Oxymyoglobin
c) Nitrosomyoglobin
d) Nitrosohaemoglobin

478. The samples taken for detection of chemical residue from a suspected carcass detained after slaughter should contain a specimen sample of
a) Blood
b) Liver
c) Kidney
d) Urine

479. Judgment of carcass with sexual odour
a) T
b) I
c) A
d) D

480. Intramuscular fat deposition in meat is called
a) Marbling
b) Seam fat
c) Caul fat
d) Leaf fat

481. The most potent aflatoxin is
a) B1
b) M1
c) G1
d) B2

482. The infections transmitted from lower vertebrate animals to man is called
a) Anthropozoonoses
b) Zooanthroponoses
c) Amphixenoses
d) Cyclozoonoses

483. Streptococcal infection fall into the category zoonoses
a) Amphixenoses
b) Zooanthroponoses
c) Anthropozoonoses
d) All the above

484. The disease that does not come under direct zoonoses is
a) Rabies
b) Trichinosis
c) Brucellosis
d) Echinococcosis

485. Diphyllobothriasis in man occurs through the ingestion of fish containing
a) Coracidium
b) Plerocercoid larva
c) Sparagnum
d) Miracidum

486. The definitive host of *Taenia saginata* is
a) Sheep
b) Pig
c) Man
d) Cattle

487. The livestock vaccinated with anthrax live spores vaccine are not allowed to be sent to slaughter for a period of
a) 12 days
b) 22 days
c) 32 days
d) 42 days

488. Plague bacilli in rat flea undergoes this type of biological transmission
a) Propogative
b) Transovarian
c) Cyclopropogative
d) None of these

489. Montenegro test is a skin test for distinguishing immune and non immune persons to
a) Leishmaniasis
b) TB
c) Brucella
d) Anthrax

490. Circling disease in sheep is caused by
a) *Leptospira canicola*
b) *Listeria monocytogenes*
c) *Yersenia pestis*
d) *Brucella ovis*

491. Transplacental transmission from mother to offspring occurs in
a) Q fever
b) Anthrax
c) Toxoplasmosis
d) KFD

492. Epidemic of disease in bird population is referred to as
a) Epizootic
b) Enzootic
c) Epornithic
d) Ornithic

493. Small pox was officially eradicated worldwide in
a) 1969
b) 1976
c) 1966
d) 1989

494. Breakbone fever is a synonym of
a) JE
b) Dengue
c) Plague
d) All of the above

495. Cestode parasite which produced typical unilocular hydatid cyst is
a) *Echinococcus vogeli*
b) *Echinococcus granulosus*
c) *Echinococcus multilocularis*
d) *Echinococcus oligarthis*

496. Sternes' vaccine for anthrax in human is
a) Avirulent live spore vaccine
b) Live attenuated spore vaccine
c) Formalin killed vaccine
d) Toxoid

497. The disease which belong to metazoonoses subtype I is
a) Clonorchiasis
b) Tick borne encephalitis
c) Paragonimiasis
d) Yellow fever

498. The host for measles virus
a) Man
b) Gibbon
c) Cat
d) Both a & b

499. Monkey pox is mainly seen in
a) Asia
b) Africa
c) Australia
d) India

500. UHT milk can be stored at room temperature without spoilage upto
a) 20-25 days
b) 24-48hrs
c) 30 days
d) 40-60 days

501. Influenza H1N1 infection of 2009 was first reported in
a) India
b) Mexico
c) Ireland
d) England

502. In activation of avian influenza virus can be achieved by heating the egg for 3-5 minutes at
a) 70^0 C
b) 60^0 C
c) 80^0 C
d) 100^0 C

503. Watery pork is due to
a) Decreased muscle pH
b) Increased pH
c) Swine fever
d) Swine influenza

504. Bone taint is
a) Bone cancer
b) Superficial spoilage
c) Deep seated spoilage
d) Bone TB

505. Hot water supplied inside the abattoir should have a temperature of
a) 62^0 C
b) 72^0 C
c) 82 ^{0}C
d) 52 ^{0}C

506. The duty of a meat inspector in the modern abattoir is
a) Ensure the equipment hygiene
b) Stamping of the passed carcasses
c) Proper disposal of the condemned carcasses
d) All the above

507. The preferred method for bleeding of pig is
a) Bilateral severance
b) Prone sticking
c) Severing the brachiocephalic trunk and anterior venacava
d) Thoracic inlet bleeding

508. Summer mastitis is caused by
a) Clostridium
b) Bacillus
c) Corynebacterium
d) Lactobacillus

509. Milk borne Haver Hill is caused by
a) *Streptobacillus moniliformis*
b) *Clostridium perfrengenes*
c) *Bacillus subtilis*
d) Corynebacterium *disentriae*

510. The quantity of sample required for analysis of ice cream is
a) 50g
b) 100g
c) 5g
d) 20g

511. The test employed to detect the developed acidity of milk is
a) Clot on boiling test
b) sediment test
c) Methylene blue reduction test
d) 10 minute resazurin test

512. Caesin degradatrion in coagulated UHT milk can be detected by the presence of
a) Sialic acid
b) Formic acid
c) Hydrochloric acid
d) Hydrgen peroxide

513. In mastitic milk there is an increased concentration of
a) Potassium
b) Sodium
c) Calcium
d) Phosphorous

514. Enzyme destroyed at pasteurization temperature is
a) Alkaline phosphatase
b) Trypsin
c) Pepsin
d) Chymotrypsin

515. The BIS standard for total viable count of pasteurized milk is
a) <30,000
b) >30,000
c) <20,000
d) 1 lakh

516. Human milk borne Crohn's disease is caused by
a) *M. Avium*
b) *M .paratuberculosis*
c) *M .tuberculosis*
d) *M.bovis*

517. Time temperature combination of HTST milk
a) 71.7^{0}C for 15 sec
b) 71.7^{0}C for 15 min
c) 68^{0}C for 15 sec
d) 68^{0}C for 15min

518. Organism used for testing antibiotic residue in milk
a) *B. cereus*
b) *B.sterothermophillus*
c) *L .bulgaricus*
d) *L .casei*

519. As per BIS norms the coliform count should be nil in pasteurized milk in dilution of
a) 1 in 10
b) 1 in 1000
c) All of the above
d) None of the above

520. In dairy industry, the microorganisms that survive and grow at pasteurization temperature are called
a) Thermophilic microflora
b) Thermoduric microflora
c) Mesophilic microflora
d) Psychrotrophic microflora

521. The one which is not used for abnormal milk test
a) Hotis test
b) CAMP test
c) Sodium lauryl sulphate test
d) Resazurin reduction test

522. The inherent antimicrobial factor that maintains acidity in human stool is
a) *Bifidobacterium bifidus*
b) *Lactobacillus acidophillus*
c) *L.bulgaricus*
d) *L. casei*

523. Grading marking and deciding quality of butter and ghee is done by
a) BIS
b) AGMARK
c) PFA
d) MMPO

524. Cabbagy flavour of milk is associated with
a) UHT
b) *Streptococcus lactis*
c) Psudomonas.fragi
d) Silage feeding

525. Color of casein is mainly due to
a) Riboflavin
b) Pantothenic acid
c) Carotene
d) Lactochrome

526. Type of immunoglobulin predominant in milk
a) IgA
b) IgG
c) IgM
d) IgE

527. Animal parasite infective to men known to be excreted through milk
a) T*oxoplasma gondi*
b) T.saginata
c) T.solium
d) All of the above

KEY ANSWERS

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
c	c	d	c	c	d	c	b	d	b	a	c	a	a	c
16	17	18	19	20	21	22	23	24	25	26	27	28	29	30
b	b	c	a	a	b	b	c	a	c	a	b	c	b	b
31	32	33	34	35	36	37	38	39	40	41	42	43	44	45
a	a	c	a	c	a	a	a	a	c	c	b	c	a	b
46	47	48	49	50	51	52	53	54	55	56	57	58	59	60
c	b	b	c	a	c	c	a	a	b	c	a	a	a	a
61	62	63	64	65	66	67	68	69	70	71	72	73	74	75
a	a	c	c	c	c	a	c	c	b	a	b	a	a	d
76	77	78	79	80	81	82	83	84	85	86	87	88	89	90
d	a	d	a	c	b	c	a	b	a	a	a	a	a	a
91	92	93	94	95	96	97	98	99	100	101	102	103	104	105
a	a	a	a	a	a	a	b	c	c	b	a	a	b	c
106	107	108	109	110	111	112	113	114	115	116	117	118	119	120
a	a	a	b	c	a	a	a	b	b	a	a	a	a	a
121	122	123	124	125	126	127	128	129	130	131	132	133	134	135
c	c	a	a	c	c	c	b	a	a	a	c	c	c	b
136	137	138	139	140	141	142	143	144	145	146	147	148	149	150
b	b	b	a	a	a	c	a	c	b	a	a	b	b	b
151	152	153	154	155	156	157	158	159	160	161	162	163	164	165
b	c	a	c	c	b	b	c	a	a	a	c	a	b	d
166	167	168	169	170	171	172	173	174	175	176	177	178	179	180
a	a	b	a	b	c	c	a	b	b	c	c	b	a	b
181	182	183	184	185	186	187	188	189	190	191	192	193	194	195
c	c	a	c	c	b	a	d	b	d	a	a	a	d	c

196	197	198	199	200	201	202	203	204	205	206	207	208	209	210
a	a	c	b	b	a	b	c	c	a	a	a	c	c	a
211	212	213	214	215	216	217	218	219	220	221	222	223	224	225
a	c	a	c	c	c	c	c	d	b	a	a	c	d	d
226	227	228	229	230	231	232	233	234	235	236	237	238	239	240
a	d	d	d	b	c	b	a	c	a	c	c	c	a	d
241	242	243	244	245	246	247	248	249	250	251	252	253	254	255
d	a	c	b	c	a	a	a	a	a	c	c	c	a	b
256	257	258	259	260	261	262	263	264	265	266	267	268	269	270
c	b	d	b	c	b	c	b	a	a	a	a	b	b	a
271	272	273	274	275	276	277	278	279	280	281	282	283	284	285
b	b	b	c	b	a	b	b	a	a	a	a	b	a	a
286	287	288	289	290	291	292	293	294	295	296	297	298	299	300
a	c	b	a	a	c	c	a	d	c	a	c	c	c	b
301	302	303	304	305	306	307	308	309	310	311	312	313	314	315
b	b	a	b	b	b	c	c	d	c	c	c	c	c	c
316	317	318	319	320	321	322	323	324	325	326	327	328	329	330
c	d	a	d	b	b	a	a	c	a	a	b	b	c	b
331	332	333	334	335	336	337	338	339	340	341	342	343	344	345
c	a	b	c	c	a	c	a	a	c	c	a	a	b	c
346	347	348	349	350	351	352	353	354	355	356	357	358	359	360
c	a	b	c	c	c	c	c	a	a	b	b	c	a	c
361	362	363	364	365	366	367	368	369	370	371	372	373	374	375
a	a	c	a	c	a	c	b	b	c	d	a	c	a	a
376	377	378	379	380	381	382	383	384	385	386	387	388	389	390
b	d	a	c	c	b	d	b	b	b	a	c	d	b	a
391	392	393	394	395	396	397	398	399	400	401	402	403	404	405
c	b	a	c	b	b	c	a	b	c	b	b	c	b	c
406	407	408	409	410	411	412	413	414	415	416	417	418	419	420
c	c	c	a	d	b	d	a	a	b	c	a	d	d	b
421	422	423	424	425	426	427	428	429	430	431	432	433	434	435
c	c	d	c	c	a	a	c	b	c	c	b	c	a	b
436	437	438	439	440	441	442	443	444	445	446	447	448	449	450
b	c	a	d	a	d	b	a	c	c	b	a	c	a	a
451	452	453	454	455	456	457	458	459	460	461	462	463	464	465
c	a	d	a	a	c	b	d	d	c	b	a	c	d	a
466	467	468	469	470	471	472	473	474	475	476	477	478	479	480
a	c	a	b	a	a	a	b	c	a	d	c	c	b	a
481	482	483	484	485	486	487	488	489	490	491	492	493	494	495
a	a	a	d	d	c	d	a	a	b	c	c	a	b	b
496	497	498	499	500	501	502	503	504	505	506	507	508	509	510
a	d	b	b	a	b	b	a	c	c	d	b	c	a	b
511	512	513	514	515	516	517	518	519	520	521	522	523	524	525
a	a	b	a	a	b	a	b	a	a	d	a	b	a	a
526	527													
a	a													

II. Fill up the blanks:

1. The most important vector associated with transmission of Japanese encephalitis virus is .....
2. 'Circling disease' is caused by .....
3. ..... in the placenta enhances the growth of Brucella.
4. ..... act as 'mixing vessel' for avian influenza virus.
5. Cutaneous form of Glanders can also be called as .....
6. The common clinical sign of Newcastle disease in man is .....
7. Pseudocowpox in humans is called as .....
8. Cercarial dermatitis is caused by .....
9. *Taenia saginata* and *Taenia solium* infested meat products are termed as ..... and....., respectively.
10. Biogas is a mixture of .....
11. To avoid bacterial contamination of water the well should be located not less than ..... feet from the source of contamination.
12. The components of typical water purification system comprise .....
13. Freshly made bleaching powder should contain ..... percentage of available chlorine.
14. Enrichment of lakes or water bodies is called as .....
15. An acceptable pH of drinking water is between .....
16. Example of QAC is .....
17. Early blowing of cheese is caused by .....
18. APHA stands for .....
19. The leucocyte count of mastitic milk is .....
20. Main constituent of simple detergent is .....
21. Scarlet fever is caused by .....
22. Enterotoxin produced by *S. Aureus* is heat .....
23. ..... is quality control test to detect pasteurization.
24. Fishy odour of milk is due to .....
25. ..... method is most widely used for bacterial examination of milk.
26. Headquarter of WHO is at .....
27. QAC is effective at ..... concentration.
28. Generally ..... concentration of chlorine is effective against most microorganisms.
29. In herd milk presence of long chain cocci in indicative of mastitis is due to ..... organism.
30. PFA standards are formulated and revised whenever required by an Expert Committee called .....
31. ..... level of H_2O_2 is required to initiate enzymatic reaction in lacto peroxidase system.
32. The infected bacteria containing bacteriophage DNA are called as .....
33. The causative agent for Q fever is .....
34. The colostrum the chief protein present is .....
35. In MBR Test time required to decolourise good milk is .....
36. Loss of weight during transport is called as .....
37. The smallest and most common tapeworm of dog is .....

38. Muscular haemorrhages are associated with ..... method of stunning usually if there is delay between stunning and bleeding.
39. In Halal method of slaughter incision across the neck should not serve .....
40. Hyperkeratosis is usually found in animals poisoned with .....
41. Bronzed appearance of liver is characteristic p/m finding in ..... disease of poultry.
42. Button ulcers in mucous membrane of intestines are seen in ..... disease of pigs.
43. The process of bringing meat from frozen state to normal state is called as .....
44. Slaughtered animals which are fit for Jewish consumption is described as .....
45. Animals affected with fracture or stress are considered for ..... slaughter.
46. ..... involves an increase in size of organ or cell without regard to the maintenance of normal histological relations.
47. Jewish method of slaughter is also known as .....
48. Brucellosis in human causes ..... fever.
49. Milk spot in liver is seen in ..... infestation.
50. ..... is done to detect imperfect bleeding.
51. In extremely emaciated animals, the ratio of water to protein is over ..... .
52. Judgement of poultry carcass affected with coccidiosis should be based on the degree of .....
53. Meischer's tube is a condition caused by infestation of animals by ..... .
54. In CO_2 method of stunning of pigs a concentration of ..... of CO_2 is used.
55. In imperfectly bled animals ..... ventricles contain no blood.
56. PFA and BIS stands for ..... respectively.
57. Summer diarrhea is caused by .....
58. Ropiness in milk is mainly caused by .....
59. Sweet curdling is due to the microbial production of an extra-cellular enzyme similar to ....., which causes casein to precipitate.
60. The causative organism of scarlet fever and septic sore throat in humans is .....
61. The rapid platform test for accepting milk conducted at the reception deck is .....
62. ..... are the lymph nodes commonly inspected during post mortem examination of buffalo carcass.
63. In radappertization, dose of gamma radiation applid for meat & meat products is .....
64. ..... of carbondioxide in the air is most suitable for pre-slaughter stunning of pig.
65. The PSE condition appears to occur if muscle glycogen level is .....
66. Sanitizing agent commonly used in food industry is .....
67. The organism responsible for sulfur stinker in canned product is .....
68. Meat of calf fed entirely on milk is called as .....
69. Unfit carcass in Jewish method is termed as .....
70. Beef can be stored at -25°C for ..... months.
71. Pasteurization inactivates ..... enzyme.
72. The HTST pasteurisation temperature is fixed based on the thermal resistance of the organism .....
73. Direct microscopic count for pasteurized milk should be less than .....
74. 'Storch test' is used to detect ..... of pasteurized milk.
75. Bacteria that neither grow nor destroyed at higher temperature are known as .....

76. Activation of LP system in milk to increase the shelf life of milk is referred as .....
77. Centrifugation method to remove the bacteria from milk is termed as .....
78. Predominant group of bacteria which may be present in milk as it comes out of the teat is .....
79. Fishy flavour in milk is produced by the bacteria .....
80. Boric acid is added to milk as a .....
81. Bovine spongiform encephalopathy is caused by .....
82. The antibacterial action during smoking is produced by .....
83. Deer meat is called as .....
84. Phosphorescence in meat is caused by the organism .....
85. At the area of postmortem inspection, the intensity of light should be ..... lux.
86. An animal suffering from limb fracture should be considered for ..... slaughter.
87. The reagent used to detect the time of bruising is .....
88. *Clostridium botulinum* type ..... is responsible for majority of infections from fish.
89. Treatment of meat with radiation specifically intended to destroy a particular pathogen is called as .....
90. ..... prescribes microbial specifications for milk & milk products in India.
91. Charm test is conducted to detect ..... in milk.
92. Bacteria that survive but do not multiply at pasteurization temperature are known as ..... .
93. Haverhill fever is caused by .....
94. Bacteriophages in milk residues are destroyed by .....
95. The inherent specific antimicrobial factor that maintains acidic pH in infant's stools is .....
96. As per BIS Coliform count should be nil in pasteurized milk in dilutions at .....
97. Abnormal milk has a chloride content more than .....
98. Nitrate test detects ..... adulteration in milk.
99. Defective pithing results in a condition known as ..... spleen.
100. Deep-seated spoilage of meat due to the putrefaction by spore forming anaerobic bacteria is known as .....
101. ..... is a legalized organization for the sale of inferior quality meat after prior treatment.
102. Wrong position of electrodes during electrical stunning leads to .....
103. White spots in meat are caused by .....
104. Proteolysis of meat without putrefaction cause by facultative anaerobic organisms gives rise to .....
105. Rabies is best diagnosed by ..... examination in the slaughter animals.
106. In pSE muscle, pH is reduced to ..... within an hour or less of slaughter.
107. pH of meat is measured by ..... indicator test.
108. Schechitha is the term associated with ..... type of slaughter.
109. In India AGMARK defines the quality of ..... products.
110. According to BIS SPC 50 lakhs per ml is considered as ..... grade (quality) milk.
111. In dried milk (milk powder) SPC should not be more than ..... per gram.
112. ..... contains maximum amount of Bacteriophages in cheese industry.
113. Rotation of starter culture is a method to ..... phase attack on starter.

114. CAMP test is conducted to identify ..... (organisms) in mastitis milk by using *S. aureus*.
115. In RRT on milk, Resazurin dye is converted into ..... resulting in colourless.
116. The normal acidity of milk is .....
117. Bromothymol blue test on milk is conducted to test the ..... of milk.
118. Ropiness of milk is caused by ..... bacteria.
119. ..... is the act of bleeding.
120. Slaughter spleen is produced by .....
121. Part of slaughter house where the animals are rested .....
122. CO_2 is used to ..... slaughter animals in humane slaughter.
123. Important afflotoxins involved in the intoxication of milk or .....
124. ..... organism is used as pathogenic index organism for the perfect pasteurization.
125. 'Cold sterilization in milk industry refers to ..... system.
126. Milk allergy is associated with ..... immunoglobulin.
127. ..... component of the L-P system is naturally present in milk.
128. ..... is a common infectious disease worldwide and the best known of milk related viral disease.
129. Human milk borne Crohn's disease is caused by .....
130. Zoonotic viral disease agent is shed in the milk of cows, bitten by ticks, is .....
131. Ingestion of raw milk can potentially spread ..... protozoan disease to human.
132. ..... is the causative agent of ornithosis in birds.
133. The principal hosts for Trichinella spiralis are ....., man and rat.
134. ..... formaldehyde can be used in the slaughter house to destroy the anthrax spores.
135. ..... organisms are mainly isolated from chronic non-suppurating arthritis cases seen commonly in the stifle joints of pigs.
136. ..... is a common bacterial zoonotic disease seen in rabbit butchers.
137. Licked beef is associated with ..... larvae.
138. Normal accepted concentration of CO_2 as pre-slaughter anaesthesia for pigs is .....
139. Carcasses after post-mortem must be kept at a constant temperature of not more than ..... in the slaughter house.
140. ..... meat is preferred now a days because it do not lead to cardiac problems in consumers.
141. Drip is the condition associated with ..... meat.
142. Cladosporium herbarum causes ..... spots in meat.
143. ..... part of the animal carcass is the main source of contamination of microorganisms of meat.
144. Whisker in meat is caused by .....
145. Pasteurization inactivates ..... enzymes.
146. Expand BIS.....
147. Cotton seed oil in ghee can be detected by ..... test.
148. Bifidus factor is present in ..... milk.
149. Yeast which causes red discolouration of milk is .....
150. Predominant group of bacterial organisms present in the milk when it comes out of the udder is .....
151. Fruity flavour of the milk is caused by the bacteria .....

152. Major type of immunoglobulin present in the colostrums is Secretory .....
153. Assessment of internal quality of chicken egg without breaking the egg is done by .....
154. Lairage for cattle should have enough space to accommodate ..... days supply of cattle to the abattoir.
155. Clostridium botulinium type ..... is responsible for majority of infections from fish.
156. The organ first affected by rigor mortis is .....
157. The test used to detect imperfect bleeding is .....
158. The organism which is called as 'sulphur stinker' is .....
159. Bovine spongiform encephalopathy, when transmitted to human beings, is expressed as a disease called as .....
160. LP system consists of thiocyanate,Hydrogen peroxide and .....
161. Secretory immunoglobulin present in milk .....
162. Typical minimum time-temperature combination for UHT treatment of milk is ..... for not less than one second.
163. Standard microorganism used to assess perfect pasteurisation of milk is .....
164. ..... is an indirect test to assess the microbial load in raw milk.
165. .....National agency gives microbial specifications for milk and milk products.
166. Immediately after pasteurisation, the milk should be cooled to .....
167. Established protozoan parasite excreted through bovine milk is .....
168. Alkaligenes viscolatis in milk causes a condition known as .....
169. pH of the mastitis milk is .....
170. ..... is an indirect test to assess the microbial load in raw milk.
171. ..... forms the primary animal body source of microbial contamination of meat.
172. Milk spots in liver are produced by the larvae of .....
173. Stunning is prohibited in ..... method of slaughter.
174. Fish botulism is caused by clostridium botulinum type .....
175. Brucellosis in man causes ..... fever.
176. ..... is used for emergency disinfection of water.
177. CO level in cigarette smoke is ..... ppm.
178. The presence of ..... organism in water is an important confirmatory evidence of recent faecal pollution of water.
179. Bacteria used against insect pests is ..... .
180. An important gas produced from manure pit is.....
181. Intensity of noise is measured in .....
182. Hardness of water should not exceed ..... mg/l.
183. The congregation of large number of microbes in the atmosphere is known as .....
184. Agglomeration of fine carbon particles containing hydrocarbons and mineral matter is called .....
185. Sewage contains ..... water.
186. ..... are involved in the life cycle/Transmission of metazoonoses.
187. In India 96% of Rabies is spread by the bite of .....
188. Yellow fever is transmitted by .....
189. The disease caused by a dog hook worm in man is known as .....
190. Cyclozoonoses are ..... types.
191. KFD is transmitted by bite of .....

192. Rabipur vaccine is used to prevent .....
193. The bacterial load in surface water is ..... than the ground water.
194. The dye pipe industry effluent contains ..... as a toxic agent.
195. Total viable count is the enumeration of .....
196. Disease acquired in hospital is called ..... infection.
197. The paint industry effluent contains ..... as a toxic.
198. Sulphate salts could lead to ..... hardness of water.
199. Bysinossis is due to inhalation of .....
200. ..... is the method to clean rapid sand type of filters.
201. Formation of vital layer in slow sand filters is called as .....
202. If the BOD of sewage is ..... or more, then it is calld as "strong".
203. Anaerobic method of composting is also called as .....
204. Smust is dust mixed with .....
205. The important properties of noise are .....
206. Expand NEERI .....
207. In chlorination of water, ... causes most of the anti-microbial effect.
208. The dose of chlorine and ozone for disinfection of water is ..... respectively.
209. Increased concentration of ..... pollutants in the atmosphere results in acid rain and green house effect respectively.
210. 78% of air is ..... and 21% of air is .....
211. ..... is a water borne viral dissase and sensitive for ..... disinfectant.
212. The pH of rain water is towards .....
213. Frost bite is common in ..... altitude.
214. The amount of oxygen absorbed by sewage during a specified time is known as .....
215. The most important fact that has played a prominent role in the spread of cholera is .....
216. The strain of *E.coli* which is very important from the zoonosis aspect is .....
217. Canagawa test is used in the identification of .....
218. Silage consumption is associated with ..... infection in cattle.
219. Example for a rickettsial disease mainly affecting abattoir workers is .....
220. 'Black death' is caused by .....
221. KFD is transmitted by the vector .....
222. The occurrence of a disease in a community, clearly in excess of expectancy is called as .....
223. The term zoonosis was first coined by the scientist .....
224. Chance of guinea worm infection is more in ..... wells.
225. Hardness of drinking water is between ..... mg/l.
226. Orthotoludine test is used to detect ..... in water.
227. The sand bed of filter gets covered with a slimy growth known as .....
228. Boiling removes ..... hardness in water.
229. ..... fish is used in the biological control of mosquitoes.
230. In India, the international center for monitoring air pollution is at .....
231. Repeated exposure to noise around ..... Db may result in permanent hearing loss.
232. Concentration of a toxicant up the food chain is called as .....
233. Kanagawa test is used in the identification of .....
234. CJD is caused by ..... in human beings.
235. Interaction of agent, host and ..... are essential for causation of disease.

236. Hydatid disease in man is caused by ingestion of .....
237. ..... should be sent to the laboratory for Rabies diagnosis.
238. Streptococcal B heamolytic organisms are responsible for ..... fever.
239. Anaerobic method of composting is also called as .....
240. Pigs are the ..... in epidemiology of Japanese Encephalitis and man act as a ..... host.
241. Break bone fever is a synonym for .....
242. About 2-8% cat-scratch disease patients suffer from a condition known as ..... which occur as a result of the inoculation of the pathogen in the conjunctiva.
243. The yellow fever virus exists in two cycles namely .....
244. The spread of plague from rat-to-rat only through fleas named .....
245. Ohara's disease is caused by ..... organism
246. The zoonotic infections in which both man and animals acts as a reservoir of infection are called .....
247. Man acquires Trichinella infection by .....
248. Temporary hearing loss occurs in the ferequency range of ..... Hz.
249. ..... are important radio isotopes released into the environment due to nuclear explosions.
250. World Environment Day falls on .....
251. Algal growth in ponds can be reduced by treating water with .....
252. ..... is associated with eggshell thinning in certain species of birds.
253. Increased concentration of nitrates in water leads to the increase in growth of .....
254. Most of the outbreaks of paralytic polio are due to ..... type.

KEY ANSWERS

1	***Culex tritaeniorrhynchus***	2	***Listeria monocytogenes***
3	**Erythritol**	4	**Pigs**
5	**Farcy**	6	**Conjunctivitis**
7	**Milker's nodules**	8	**Schistosomes**
9	**Measly beef; Measly pork**	10	**Methane (59%), Carbondioxide (38%) and Oxygen (2%)**
11	**50/10 mt**	12	**Storage, filtration and disinfectants**
13	**33**	14	**Eutrophication**
15	**6.5 and 8.5**	16	**n-hexodecyl trimethyl ammonium bromide**
17	***Escherichia coli***	18	**American Public Health Association**
19	**More than 50,000/ml**	20	**Sodium carbonate**
21	***Streptococcus pyogenes***	22	**Resistant**
23	**Phosphatase test**	24	***Pseudomonas icthyosmia***
25	**Standard Plate Count (SPC)**	26	**Geneva**
27	**200-400 mg/litre**	28	**150-200 mg/litre**
29	**Streptococci**	30	**Central Committee for Food Standards (CCFS)**
31	**1:10**	32	**Lysogenic bacteria**
33	***Coxiella burnetti***	34	**V-globulin**
35	**3-4 hours**	36	**Shrinkage**

37	*Echinococcus granulosus*	38	Electrical
39	Spinal cord	40	Chlorinated hydrocarbons
41	Fowl typhoid	42	Hog Cholera
43	Thawing	44	Kosher
45	Emergency	46	Hyperplasia
47	Schechita	48	Undulant
49	Ascaris	50	Malachite green test
51	4:1	52	Haemorrhage and emaciation
53	Sarcosporidiosis	54	65-70%
55	Right	56	Prevention of Food Adulteration Act and Bureau of Indian Standards
57	*E. coli*	58	Bacillus spp
59	Renin	60	*Streptacoccus pyogenes*
61	CDB (Clot on Boiling Test)	62	Prescapular & Popliteal
63	25-45 KGy	64	70%
65	Decreased	66	Chlorine
67	*Clostridium nigrificans*	68	Veal
69	Tereffa	70	18
71	Phosphalase	72	*Coxiella burnetti*
73	30,000 cfu/ml	74	Proxidase activity
75	Thermoduers	76	Cold sterilization
77	Clarification/ Bactofugation	78	*Staphylocucus aureui*
79	*P. flurescens*	80	Preservative
81	Prions	82	Formaldehyde
83	Venison	84	*Pseudomonas phosphorescence*
85	540	86	Casuality
87	Ferichet	88	E
89	Radappertization	90	BIS
91	Drug residues	92	Thermodurin
93	*Streptobacillus monolifermis*	94	Heating at 70-75°C for 30 minutes
95	Bifidus factor	96	0.1 ml
97	0.14%	98	Water
99	Slaughter	100	Bone faint
101	Fricibank system	102	Missed shock
103	Chrysosporium & Sporotrichum	104	Souring
105	AMI	106	5.5
107	Nikerzine	108	Jewish
109	Agriculture & Milk	110	Very poor
111	5	112	Whey
113	Control	114	Listerioris
115	Leuco	116	0.14%
117	pH	118	Alkalyenum viscosus
119	Sticking	120	Bithing
121	Lairage	122	Stunning
123	AFM_1 & AFM_2	124	*Coxiella burnetti*
125	Lactoperoxidase	126	IgE
127	Lactoperoxidase	128	Hepatitis A/Infectious hepatitis

129	*Mycobacterium paratuberculosis*	130	Tick borne Encephalitis
131	*Toxoplasma gondii*	132	*C. psittaci*
133	Pigs	134	5-10%
135	Erysepalothric	136	Tularaemia
137	Hypoderma	138	70%
139	7°C	140	Poultry (Chicken)
141	Frozen	142	Black
143	GIT	144	Thamnidium and mucor
145	Phosphate	146	Bureau of Indian Standards
147	Halphen's	148	Human
149	*Rhodotorula glutinis*	150	*Staphylococcus aureus*
151	*Pseudomonas fragi*	152	IgA
153	Candling	154	3
155	E	156	Heart
157	Acid Malachite green test	158	*Clostridium nigrificans*
159	Creutzfeld-Jakob disease (CJD)	160	Lactoperoxidase
161	SIgA	162	132° C
163	*Coxiella burnetii*	164	Dye Reduction/MBRT/RRT
165	BIS	166	5°C
167	*Toxoplasma gondii*	168	Ropiness
169	7.2 (Alkaline)	170	MBRT
171	Hair, hide	172	Ascaris
173	Jatka	174	E
175	Malta	176	Iodine
177	200-400	178	Faecal streptococcal
179	*Bacillus thuringensis/B. popilliae*	180	Methane/NH_3/CO_2/H_2S
181	Decibels	182	300
183	Germ cloud	184	Soot
185	99.9%	186	Invertebrates
187	Dogs	188	Aedes
189	Pubneous larva migrans	190	Obligatory and non obligatory
191	Tick	192	Rabies
193	More	194	Lead
195	Total aerobic bacteria	196	Iateogenic
197	Lead	198	Permanent
199	Cotton dust	200	Back washing
201	Zooglial layer	202	300
203	Anaerobic digestion	204	Smoke
205	Frequency and loudness	206	National Environmental Engineering Research Institute
207	Hypochlorous acid	208	30 mg/l and 100 mg/l
209	SO_2 and CO_2	210	Nitrogen; oxygen
211	Cholera; chlorine	212	5.6 (acidic)
213	High	214	Dissolved oxygen
215	Water	216	*E.coli* O_{157} N_7
217	*Vibrio parahaemolyticus*	218	Listeriosis
219	Q Fever	220	*Yersinia pestis*
221	*Haemophysalis spinigera*	222	Epidemic

223	**Rudolf Vischow**	224	**Shallow**
225	**60-80**	226	**Free and combined chlorine**
227	**Zooglial/biological layer**	228	**Temporary**
229	**Guppi**	230	**Delhi**
231	**70**	232	**Biomagnification/**
233	***V. parahemolyticius***	234	**Prions**
235	**Environment**	236	***Ecchinococcus granulosus* egg through food and water**
237	**Brain**	238	**Scarlet**
239	**Bangalore Method**	240	**Principal host; *dead end***
241	**Dengue fever**	242	**Perinand's oculoglandular syndrome**
243	**Urban and Sylvatic cycle**	244	***Xenopsylla cheopsis***
245	***Francicella tularensis***	246	**Amphixenosis**
247	**Eating row/partially cooked pork**	248	**4000-6000**
249	**Calcium 137 and Strontium 90**	250	**June 5**
251	**Copper sulphate**	252	**DDT**
253	**Blue green algae**	254	**Type I**

III. Write True or False:

1. Kyasanur forest disease is transmitted by Haemophysalis ticks.
2. Anthraponoses are transmitted from animal to man.
3. The parasite, which blocks the absorption of Vitamin B_{12} from the human intestine, is *Diphyllobothrium latum.*
4. The important reservoirs for black death in India are rats.
5. Histoplasmosis is commonly seen in peoples visiting caves.
6. Autoinfection is associated with *Taenia solium.*
7. Blood is not the source of infection for rabies.
8. Sterne vaccine is used for the vaccination of animals against anthrax.
9. Waterfowls are the major reservoir hosts for wide spread transmission of avian influenza.
10. Aspiration of fluid from the hydatid cyst is contraindicatead.
11. Rainwater has corrosive action on lead pipes.
12. Ozone has a strong virucidal effect.
13. High water temperature enhances growth of microorganisms.
14. The combination of smoke and fog is called 'smog'.
15. Mechanical compositing is an aerobic method of composting.
16. Hardness of water appears to have a beneficial effect on cardiovascular diseases.
17. Yellow fever is one of the vector-borne diseases.
18. Temporary hardness in water is due to the presence of calcium and magnesium bicarbonates.
19. Most common air pollutant is carbon monoxide.
20. The most commonly used disinfectant in the carcass burial method is lime.
21. Phosphatase enzyme is always present in the pasteurized milk.
22. Bacteriophage is not a virus.
23. Pseudomonas aeroginosa can grow at 5°C but not at 45°C.
24. Yellow milk defect is caused by *pseudomonas synxantha.*
25. Sweet curdling in milk is due to lactose fermentation.

26. When metabolic product of one organism is utilized as a food stuff by the other, the association is called synergism.
27. *Mycobacterium tuberculosis* is more heat resistant that *Coxiella burnetti.*
28. Milk aseptically leaving udder is said to be almost sterile.
29. Addition of ice-blocks directly into milk improves the keeping quality of milk.
30. Elimination of fore-milk is not desirable as it practically is free of microorganisms.
31. Lairage is a place where suspected animals are kept for further detailed examination during A.M. inspection.
32. Exudation of water from the frozen meat is known as drip.
33. Proteolysis is a predominant chemical change that take place during ageing of meat.
34. In captive bolt pistol stunning, veslocity of bolt at which it strikes the frontal bone of animal to produce unconsciousness is 73 m/s.
35. Usually electrical stunning is not carried out in buffaloes owing to their thick skin and resistant of hairs to electric current.
36. Animal with high fever are offered for slaughter.
37. Halal is the best method of slaughter.
38. The bactericidal effect of wood smoke is mainly due to presence of organic acids in it.
39. HACCP stands for Hazard Analysis of Critical Control Points.
40. In SPC if the plates are having more than 300 organisms means, we have to go for lower dilutions.
41. Lactanins are a part of non-specific anti-microbial system in raw milk.
42. *Staphylococcus aureus* produces thermolabile enterotoxin.
43. When contamination of milk with large number of coliforms are suspected, MPN is not suitable for examination.
44. In in-bottle pasteurization, post-pasteurization contamination will be less.
45. Resazurin reduction test is quicker than methylene blue reduction test.
46. Chemical method is commonly practiced in the sterilization of dairy cans.
47. In dairy plant it is better to use hard water.
48. *Clostridium botulinum* produces only food intoxication.
49. For export of milk products, BIS standards should be followed.
50. The organ first affected by rigor mortis is heart.
51. Meat with high fat content is not good for curing.
52. Dark firm dry meat will have a very low pH.
53. 'Shrinkage' in case of animals is mainly due to loss of water.
54. Heart should be beating even after stunning for effective bleeding.
55. Freezer burn is a condition mainly noticed in offals.
56. Radappertization pertains to radiation sterilization.
57. Gutting of fishes in the sea immediately after catching reduces the risk of Anisakiasis.
58. Bone taint is mainly observed in the meat from hip or shoulder region.
59. Cold sterilization of milk is otherwise known as L-P system.
60. Satisfactory raw milk in RRT indicates resazurin diso numbers 6, 5, 4.
61. Bitty cream is due to the growth of *S. lactis.*
62. Organic phosphates are the insecticides of group that constitute the principal health hazards to consumers of milk and milk products.
63. Tick borne encephalitis is transmitted to children primarily from the milk of infected goats.
64. Penicillin residues in milk are not destroyed by pasteurization.
65. pH of mastitis is higher than that or normal milk.
66. Enzyme phosphatase is present in the milk of normal animals.

67. *Staphylococcus aureus* fails to produce enough enterotoxin in highlyt contaminated milk.
68. Rigor mortis is an undesirable character in meat trade.
69. Pickling do not destroy parasites in meat.
70. Hydatidosis is transmitted to man by the consumption of improperly cooked meat.
71. Clostridium botulinum type A is frequently isolated from aquatic animals.
72. Destruction of all microorganisms & parasites including spores in meat is achieved with 4-6 Mrad dose of irradiation.
73. Putrifying bacteria only grow at temperature above freezing.
74. Cooked meat do not cause food poisoning due to Cl. botulinum but does cause due to *S. aureus* enterotoxin.
75. Flat souring of canned meat is due to Thermophilic spore forming organisms.
76. Masseter muscle should be examined for the presence of Cysticercus cellulosae.
77. Thickness of muscle and excessive fat are the two important factors that prone the slaughter animals to bone taint.
78. Fresh milk, directly collected from the animal contains no microorganisms.
79. Lactoferrin is a non specific inherent antimicrobial agent present in milk.
80. SPC at 37°C do not reflect the true picture of total number of bacteria in milk.
81. Microbial load in milk effects the production of enterotoxin by *S. aureus*.
82. Radionuclide, Strontium-90 in milk when ingested becomes localized in bone, has a half life of 28 years.
83. Tremetol, a plant toxin excreted in milk easily get destroyed by pasteurisation.
84. USFDA has fixed the tolerance level of DDT, in milk at 0 level.
85. Milk allergy is attributed to albumin fraction of milk.
86. Heat treatment of milk inactivates and eliminates penicillin fraction and renders the milk safe.
87. Protozoan cysts are excreted in the milk of cows posing a public health problem.
88. Salmonella in milk survives pasteurisation.
89. Milk is considered good quality when Disc No. shows 2 by RRT.
90. SPC to Thermophiles in milk samples is done at 55°C.
91. Macconkey agar is the selective media for the SPC for yeasts and moulds in milk products.
92. *S. agalactiae* and *S. lactis* are the starter cultures.
93. COB test is conducted on pasteurized milk.
94. Psychrotrophs do not multiply at refrigeration temperature.
95. Satisfactory pasteurized milk should have the SPC/ml not more than 30,000.
96. UHT refers to heat treatment of milk at 100°C for 15 sec.
97. Bilirubin test detects bruising of carcass.
98. Antemortem examination forms 5 per cent of meat inspection.
99. Rabies is detected only on P.M. examination.
100. Animal with obturator paralysis is categorized under emergency slaughter.
101. Marked fullness of subcutaneous blood vessels indicates dead animal meat.
102. Pig fat has refractive index of 51.
103. Boiling test detects abnormal taste and odour.
104. Crocodile meat is an example of unconventional meat.
105. Botulism toxin is thermolabile.
106. No marbling or very little marbling is seen in muttom.
107. Rigor mortis is an undesirable change in mat which lowers the keeping quality.
108. Water content of the beef per 100 gram is 60 per cent.
109. Measly beef is associated with *Trichinella spiralis*.

110. Weil's disease in man is caused by *Leptospira biflexa.*
111. Malta fever is caused by *Brucella meletensis.*
112. Judgement in case of carcass with anthrax, is that the carcass may be passed after removing the affected organs.
113. Ascolis precipitation test is for Listeriosis.
114. Staphylococcus aureus produces thermostable toxin in milk products.
115. The organisms, which survive pasteurization, are known as thermodurics.
116. Penicillin residues in milk are destroyed by pasteurization.
117. Bifidobacterium bifidus maintain alkaline pH in infants stools.
118. Lactobailli and lactococci in raw milk and cheese cause histamine poisoning in consumers.
119. Milk and milk products associated with staphylococcal food poisoning induces symptoms in 24 hours after ingestion.
120. *Salmonella typhi* organisms are excreted in cows' milk.
121. Outbreaks of listeria monocytogenes infection in man is more common in frozen milk products than in raw milk.
122. *E.coli* 0157:H7 is a milk borne pathogen of international importance.
123. SPC of psychrophilic microflora of milk is estimated by incubating the plates at 22°C for 14 days.
124. Pasteurized milk is considered as unsatisfactory when its SPC is more than 2 lakhs.
125. UHT milk can be kept at room temperature for a maximum period of 24 hours and (unopened) upto 6 months.
126. Radio nuclide, strontium 90, with an half life of 28 years localizes in the bone of milk consumers.
127. Phages are not destroyed at pasteurization temperatures.
128. BIS is the national agency that prescribes microbial specifications for milk and milk products in India.
129. Anti microbial agent, lactoperoxidase is present in human milk and not in cows milk.
130. Tremetol, an alkaloid of plant origin excreted in milk causes milk sickness in consumers.
131. Bitty cream is mainly caused by bacillus cereus.
132. UHT refers to the heat treatment of milk at 132°C for not less than 15 minutes.
133. Nitrate test detects adulteration of water in milk.
134. Duration of exposure of CO_2 as pre-slaughter anaesthesia is 45 minutes.
135. Lactic acid formation in the muscle is more if the animal is under stress prior to slaughter.
136. Chilling a procedure prevents the activity of meat spoilage organisms.
137. Ordinary cooking of meat do not destroy botulinum toxin.
138. Increased PO_2 and reduced CO_2 in the vicinity of stored meat reduces meat spoilage.
139. Brucella organisms in the order of their virulence to man are *Brucella abortus*, *Brucella meletensis* and *Brucella suis.*
140. Intensity of light at inspection points in the slaughter house should not be less than 540 lux.
141. Tympanitis cases are included under emergency slaughter and not under casuality.
142. Stunning is prohibited in Jataka (Sikh) method of slaughter.
143. Salmonella is an indicator bacteria of faecal pollution of meat.

144. Captive bolt pistol in stunning should strike the brain at a speed of 76-91 meters per second.
145. pH of meat 6.8 and above after 24 hours of slaughter is an indication of decomposition.
146. *Listeria monocytogenes* multiplies in chilled meat.
147. Homogenisation of milk reduces bacterial count.
148. Phosphatase enzyme activity in pasteurized milk indicates perfect pasteurisation.
149. Lactoperoxidase is present in human milk but not in cow's milk.
150. Phages are destroyed by pasteurisation.
151. Yeasts and moulds are the major "spoilage" micro organisms of butter.
152. *Listeria monocytogenes* is more heat tolerant than most non-spore forming pathogens in milk and is thermoduric.
153. Aflotoxin B1 which is excreted in milk as its metabolite M1 is the most abundant and most toxic of all the aflotoxins.
154. Milk boiled for prolonged period of 3-6 h prevents milk allergy.
155. Psychrophilic count of raw milk is done by incubating the plates at 7°C for 10 days.
156. All the micro-organisms and parasites including spores of Clostridium botulinum are destroyed by ionizing radiation at a dose of 4-6 mrad.
157. Freezing destroys bacteria in meat.
158. Tibia sour is a deep seated spoilage by anaerobic spore formers.
159. Lowered watering to waiting animals for slaughter results in better carcass dressing and reduced bacterial contamination.
160. Rigor mortis is a desirable change in meat which enhances the keeping quality.
161. The chances of man getting tetanus by consuming the flesh is extremely unlikely.
162. Pork in India is considered as an unconventional meat.
163. Immunoglobulin present in milk is IgA.
164. Microbiological standards for milk and milk products are prescribed by BIS.
165. Time-Temperature combination for UHT treatment of milk is 132°C for 1-2 sec.
166. Haverhill fever transmitted through milk is caused by *Streptobacillus moniliformis.*
167. Immediate cooling of heat treated milk to 5°C lowers the keeping quality of milk.
168. Standard index organism usesd to test time-temperature combination in pasteurisation is *E.coli.*
169. Bacteriophages are destroyed by pasteurisation.
170. Q-fever is causesd by *Streptococcus pyogenes.*
171. Mastitis milk has a chloride content of 0.08 – 0.14%.
172. Psychrotropic count in raw milk is done by incubating plates at 5-7°C for 7-10 days.
173. Coliform count in raw milk should be absent in 0.01 ml as per BIS.
174. Enterotoxin production by staphylococcus aureus is faster with low bacterial count.
175. Maximum amount of bacteriophages are collected in whey.
176. L-P method of preservation is a possible alternative to cooling of milk.
177. *Bifidobacterium bifidus* causes enteric infection in children.
178. L2 fraction of lactanin is heat labile and gets destroyed at pasteurization temperature.
179. Pasteurisation has little effect on DDT in milk.
180. Calcium is essential for the phage attachment, penetration and proliferation in the bacterial cells.
181. Infectious hepatitis A and B are transmitted through milk.
182. Tick borne encephalitis is the primary zoonotic viral disease acquired through milk.
183. Spore formers cause a condition known as bitty cream.
184. Antibiotics are excreted in milk.

185. Coliforms are killed at pasteurization temperature.
186. Turbidity test is conducted on sterilized milk.
187. Dye reduction tests on milk are related to pathogenic bacteria.
188. COB test on milk is a laboratory test to detect pathogenic bacteria.
189. Thermodurics grow and multiply in the refrigerated milk.
190. Putrefactive bacteria and moulds do not grow together in meat.
191. Transport stress on slaughter animals results in shrinkage of meat.
192. Black spots are common in meat stored at 0°C.
193. Pickling reduces rancidity of meat.
194. Slaughter spleen is due to anthrax.
195. Moulds in meat require least Aw, followed by yeasts and bacteria in ascending order.
196. Cysticercosis is transmitted to man by the consumption of raw or improperly cooked meat.
197. In PSE, muscle pH is reduced to 5.5 within a period of 30-60 min. of slaughter.
198. Butchers jelly condition is associated with larva of Hypoderma lineatum.
199. Hydatidosis is transmitted to man by the consumption of raw or improperly cooked meat.
200. Pickling of meat destroys pathogenic bacteria.
201. Freezing of pork affected with cysticercus cellulosae at -10°C for 4 days do not render the pork safe.
202. The minimum recommended concentration of residual chlorine in water is 0.5 mg/l.
203. Decrease in the ozone level in the stratosphere is beneficial.
204. Soot is black dust containing carbon particles impregnated with tar.
205. NO_2 can penetrate alveolar capillary membrane and produce pulmonary oedema.
206. Chlorination is most effective when the pH of water is around 8.5.
207. Daily manure production is inversely proportional to live body weight of animals.
208. Absence of coliforms and presence of faecal streptococci indicate recent pollution.
209. The kata thermometer is an alcohol thermometer.
210. Carbonate hardness of water is classified as permanent hardness.
211. Hospital refuse can be disposed by dumping.
212. Glanders is an airborne zoonotic disease.
213. Poliomyelitis is a zoonotic disease.
214. Giardiasis is an emerging zoonotic disease transmitted from dogs and cats.
215. Weil-Felix test is the most widely used specific test for the diagnosis of Rickettsial infections.
216. Antirabies vaccine can be produced in plants.
217. Herons act as reservoir hosts, while pigs act as amplifier hosts for J.E.
218. All the rabid animals exhibit Negribodies in their brain tissues.
219. People are the definitive hosts and cattle are the intermediate hosts for Taenia saginata.
220. Groin is the most common site of the buboes in plague.
221. *Brucella canis* cause brucellosis in man.
222. Air borne transmission of rabies is associated with cats.
223. World Zoonoses Day is celebrated on July 6th every year.
224. Growth of Thiobacillus make the water highly alkaline.
225. About 2.5 grams of good quality bleaching powder would be required to disinfect 1000 liters of water.
226. Perchloron is a calcium compound containing 60-70% available chlorine.
227. Chlorine in the form of hypochlorous acid is a bad disinfectant.

228. Typhoid, DPT & Tetanus Toxoids must be stored in cold part but never in freezer.
229. Placental transfer of lead occurs in human.
230. Permutit is a complex of calcium, aluminium and Phosphates.
231. Orthotolidine test determines the presence of free chlorine as well as combined chlorine in water.
232. The minimum recommended concentration of free chlorine in water for effective action is 0.5 mg/l for one hour.
233. Low nitrate content in water results in methaemoglobinaemia.
234. The drinking water should be moderately hard with a level of hardness at 3.6 (150-300 mg/l).
235. Horrocks apparatus is an air testing apparatus.
236. Artisan well water is soft water.
237. Screening under primary treatment of modern sewage treatment removes pathogens.
238. Pigeon is reservoir for *Cryptococcus neoformis*.
239. Inhalation of airborne spores in dust is the principal mode of transmission of histoplasmosis in man.
240. Leptospires are excreted in the infected mother's milk.
241. Diphyllobothriasis is a fish borne zoonotic disease.
242. Lyme disease caused by *Borrelia burgdorteri* is transmitted to man by the bite of Ixodids.
243. *Yersinia enterocolitica* 09 cross reacts with *Brucella abortus* complicating the diagnosis of Brucellosis.
244. Effluents of completely treated sewage possess reduced BOD.
245. Swimming pool grannuloma is caused by *Mycobacterium balne.*
246. Bleaching powder when freshly prepared contains 33% of available chlorine.
247. Rain water is the purest to start with, in nature.
248. Alum removes bacteria in water owing to its bactericidal action.
249. Formation of vital layer is known as the ripening of slow sand filters.
250. Pressumptive coliform test gives the most probable number (MPN) of coliform organisms in 100 ml of water.
251. Lead poisoning through pollution results in loss of I.Q. in school children.
252. Good light prevents hyperbilirubinemia.
253. Horrocks apparatus is an air testing device to find out the level air pollution due to automobiles.
254. Green house effect is the result of increased CO_2 content in atmosphere.
255. High nitrate content in water results in methaemoglobinaemia.
256. Sand fly transmits onchocerciasis.
257. ANTU is a multiple dose poison for rats.
258. "Super bug" is the name given for biotechnologically developed bacteria which can utilize crude oil.
259. Chlorination of water may lead to formation of carcinogens.
260. Sullage includes human excreta.
261. Temporary hardness is mainly due to calcium and magnesium sulphates.
262. Horrock's apparatus is used to find out chlorine availability of water.
263. Residual chlorine will be present in break point chlorination.
264. Microbiological quality of deep well water is superior to shallow well water.
265. Sea water, surface water, ground water and rain water are vital elements of hydrological cycle.

266. Air pollution causes green house effect in troposphere and ozone holes in stratosphere.
267. Sulfuric acid is the major component of acid rains.
268. Activated sludge is a purified sludge having rich aerobic microflora.
269. Sedimentation process in the treatment of liquid waste is a time consuming step and hence it can be bypassed.
270. Organic matter in the water determines the residual chlorine content of the water.
271. Floc is a mixture of aluminium sulphate, suspended solids and other organic impurities.
272. Chlorides in water contributes to temporary hardness.
273. Fluorides in drinking water is undesirable.
274. Only Gamma radiations are hazardous.
275. The working of the oxidation pond is mainly dependent on anaerobic micro organism and sunlight.
276. Smoke index measures the level of air pollution.
277. Dengue haemorrhagic fever is always causd by the infection with more than one strain of virus.
278. Reservoir for a disease agent cannot be a non-living object.
279. Refrigeration can prevent the multiplication of Listeia organisms in food.
280. Killing all the rats at the peak of epidemic will not help in controlling the spread of plague.
281. Salmonellosis infection is an example of emphixenosis.
282. Abortus bang ring test cannot be done in skimmed milk.
283. *Leptospira biflexsa* is pathogenic to man.
284. *Costridium botulinum* type E outbreak is mostly associated with fish.
285. Scabies is an ectoparasitic zoonosis.
286. Reason for Kuru is cannibalism.
287. Presence of Clostridium spores alone in water indicates old contamination.
288. In Katadyn filter bacteria are killed by oligodynamic action of the silver ions.
289. Industrial anthrax is mainly pulmonary form.
290. Bovine spongiform encephalopathy is caused by meningococci.
291. Pigbel disease is caused by *Clostridium perferingenes* type C.
292. Based on infection sharing, KFD is a disease shared between domiciliated animal and man.
293. Biohazard class I means there is a very high hazard to personals who are handling it.
294. Casoni's test is associated with Toxoplasma.
295. Staphylococcal enterotoxin is thermolabile.
296. *Brucella ovis* is pathogenic to man.
297. Rabies requires two vertebrate hosts to complete the cycle.
298. Blocked fleas are ssociated with Kala azar.
299. Parrot fever is caused by Rickettsia rickettsii.
300. Strauss test is for the diagnosis of glanders.
301. Q-fever is spread to man only by tick bites.
302. Comparison of rate of occurrence of disease among those, exposed to the factor to the rate of among those not exposed is referred as CFR.
303. Extrinsic incubation period is always associated with metazoonosis.
304. Hydratedosis is an example of obligatory cyclozoonosis.
305. Man gets hydatidosis by the ingestion of eggs of Echinococcus.
306. Rats, lizards are the synanthropic hosts that spread diseases to man.

307. Man acquires parrot fever by inhalation.
308. Microbial zoogleal film is an important functional part in the Trickling filter.
309. Activated sludge is otherwise known as Floc.
310. Gallionella are iron bacteria that clogs the water pipes.
311. Dick test determines susceptibilities of children to scarlet fever.
312. Triple antigen protects children from diphtheria, wooping cough and tetanus.
313. Biological layer is absent in slow sand filters.
314. Naeglariasis is also known as Amoebic meningo encephalitis.
315. Bangalore method of anaerobic composting is otherwise known as hot fermentation process.
316. Immediate effect of air pollution is primary lung cancer.
317. Chlorine is used as a chemical coagulant in the treatment of water.
318. Methyl orange titration test is used to determine free and combined chlorine in water.
319. The mean radiant temperature of the surroundings is measured by maximum thermometer.
320. The hospital refuse should be disposed by dumping.
321. Pneumoconosis is associated with agricultural worker.
322. Hydatid disease is an example of obligatory cyclozoonosis.
323. Ecological imbalance cause epidemic of diseases.
324. Cat scratch disease is an emerging viral zoonotic infection.
325. *Histoplasma capsulatun* exists as a saprophyte in the soil.
326. Actinomycosis is a zoonotic disease.
327. Pulse Net is national network of public health laboratories that perform DNA 'fingerprinting" on bacteria that may be foodborne.
328. *Aedes aegypti* is the classic urban mosquito vector for Yellow Fever.
329. Epizootic is a disease of low morbidity that is constantly present in an animal community.
330. The meta-zoonosis is characterized by intrinsic incubation in the invertebrate host.
331. The main reservoir of *E. rhusiopathiae* which cause erysipeloid in human is domestic swine.
332. The minimum recommended concentration of free Ch in water is 0.5 mg/l.
333. Roentgen is the Unit of absorbed dose of radiation.
334. WHO has established the standards of radiation exposure.
335. Exposure to sunlight changes the taste of water.
336. The clinical effects of Lead toxicity are glycosuria and encephalopathy.
337. The BOD of untreated domestic sewage is in range of 100-150 mg/1.
338. *E . coli* is an indicator bacterium of faecal pollution of remote origin.
339. Ozonization of water has no residual effect.
340. The chronic effect of radioactive iodine is mainly through damage of thyroid gland.
341. The thickness of sand grain in sand filter is around 1.2 m.

KEY ANSWERS

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
T	T	T	T	T	T	T	T	T	T	T	T	T	T	T
16	17	18	19	20	21	22	23	24	25	26	27	28	29	30
T	T	T	T	T	F	F	T	T	F	F	F	T	F	F
31	32	33	34	35	36	37	38	39	40	41	42	43	44	45
F	T	F	T	T	F	T	F	T	F	T	F	T	T	T

46	47	48	49	50	51	52	53	54	55	56	57	58	59	60
T	F	T	F	T	F	F	T	T	T	T	T	T	T	T
61	62	63	64	65	66	67	68	69	70	71	72	73	74	75
F	F	F	T	T	T	T	F	T	T	F	T	T	T	T
76	77	78	79	80	81	82	83	84	85	86	87	88	89	90
T	T	T	T	T	T	T	F	F	F	F	T	F	F	T
91	92	93	94	95	96	97	98	99	100	101	102	103	104	105
F	F	F	F	T	F	T	F	F	F	T	T	T	T	T
106	107	108	109	110	111	112	113	114	115	116	117	118	119	120
F	F	F	F	F	T	F	F	T	T	F	F	T	T	T
121	122	123	124	125	126	127	128	129	130	131	132	133	134	135
T	T	F	T	F	T	T	T	F	T	T	F	T	T	F
136	137	138	139	140	141	142	143	144	145	146	147	148	149	150
T	F	F	F	T	T	T	T	T	T	T	F	F	F	F
151	152	153	154	155	156	157	158	159	160	161	162	163	164	165
T	F	T	F	T	T	T	T	F	T	T	F	T	T	F
166	167	168	169	170	171	172	173	174	175	176	177	178	179	180
T	F	F	F	F	F	F	T	T	T	T	F	T	T	T
181	182	183	184	185	186	187	188	189	190	191	192	193	194	195
T	T	T	T	T	T	F	F	F	F	T	T	F	F	T
196	197	198	199	200	201	202	203	204	205	206	207	208	209	210
T	T	T	F	T	T	T	F	F	T	F	F	F	T	F
211	212	213	214	215	216	217	218	219	220	221	222	223	224	225
F	F	T	F	T	F	T	F	T	T	F	F	T	F	T
226	227	228	229	230	231	232	233	234	235	236	237	238	239	240
T	F	T	T	F	T	T	F	F	F	F	F	T	T	T
241	242	243	244	245	246	247	248	249	250	251	252	253	254	255
T	T	T	T	F	T	T	F	T	T	T	T	F	T	T
256	257	258	259	260	261	262	263	264	265	266	267	268	269	270
F	T	F	T	F	F	T	T	T	T	T	T	T	F	T
271	272	273	274	275	276	277	278	279	280	281	282	283	284	285
T	F	T	F	F	T	T	F	F	T	T	T	F	T	T
286	287	288	289	290	291	292	293	294	295	296	297	298	299	300
T	T	T	T	F	F	F	F	F	F	F	F	F	F	T
301	302	303	304	305	306	307	308	309	310	311	312	313	314	315
F	T	T	T	T	T	T	T	T	T	T	T	F	T	T
316	317	318	319	320	321	322	323	324	325	326	327	328	329	330
F	F	F	F	F	F	F	T	F	T	F	T	T	F	F
331	332	333	334	335	336	337	338	339	340	341				
T	T	F	F	F	T	F	T	T	T	F				

IV. Match the following:

I)

1. TORCH	a. Anthrax
2. Darling disease	b. *Clostridium perfringens* type C
3. Pasteur	c. *Streptococcus pyogenes*
4. BCG	d. *Borrelia burgdorferi*
5. Adolf Weil	e. *Pseudomonas pseudomallei*
6. Robert Koch	f. Leptospirosis
7. Pigbel	g. Guerin
8. Impetigo	h. Rabies
9. Erythema chronicum migrans	i. Histoplasmosis
10. Whitemore's disease	j. Toxoplasmosis

Ans: 1. j 2. I 3. h 4. g 5. f
6. a 7. b 8. c 9. d 10. e

II)

1. Water pollution indicator	a. Cholera
2. Radiation	b. Schistosomiasis
3. Acid rain	c. Biogas
4. Hydrocarbons	d. Sewage disposal
5. Ammonia in the air	e. CO_2
6. Global warming	f. Tail biting
7. Oxidation pond	g. Lung cancer
8. Renewable energy	h. Sulphur and nitrogen
9. Water based disease	i. Coulomb per kilogram (C/kg)
10. Water borne disease	j. Coliform organisms

Ans: 1. j 2. i 3. h 4. g 5. f
6. e 7. d 8. c 9. b 10. a

III)

a) Late blowing of cheese	1. Lactobacillus spp.
b) Sweet curdling	2. Escherichia Coli
c) Malta fever	3. Clostridium spp
d) Q fever	4. Bacillus spp
e) Iodophor	5. MBR Test
f) Quality control test	6. Milker's nodule
g) Pseudo cowpox	7. 200-400 Mg/litre
h) Starter culture	8. 25 mg/litre
i) Early blowing of cheese	9. Abattoir fever
j) QAC	10. Brucellosis

Ans: a) 3 b) 4 c) 10 d) 9 e) 8
f) 5 g) 6 h) 1 i) 2 j) 7

IV)

a) Anthrax
b) Hypoderma bovis
c) Lairage
d) *Cysticercus cellulosae*
e) Enterotoxaemia
f) Gid
g) Haugh Unit
h) Phosphorescence
i) *Cysticercus bovis*
j) Rinderpest

1. Clostridium spp.
2. Pseudomonas spp.
3. Meningo-encephalitis
4. Mac Fadyeans' reaction
5. Measly beef
6. Warble fly
7. A/m examination
8. Cattle plague
9. Albumen quality
10. Measly pork

Ans: a) 4 b) 6 c) 7 d) 10 e) 1
f) 3 g) 9 h) 2 i) 5 j) 8

V)

1. Red milk
2. *S.aureus*
3. Yellow milk
4. Aflatoxicosis
5. Pasteurised milk
6. Dick test
7. Blue milk
8. PseudoAppendicitis
9. UHT milk
10. Widal test

a) *Aspergillus flavus*
b) 133°C for 2 seconds
c) *Pseudomonas syncynae*
d) Food intoxication
e) *Serratia marcescens*
f) *Y.enterocolitica*
g) Typhoid fever
h) 72°C for 15 seconds
i) *Pseudomonas synxantha*
j) Septic sore throat

Ans: 1. e 2. d 3. i 4. a 5. h
6. j 7. c 8. f 9. b 10. g

VI)

1. TA spoilage
2. FMD
3. Freezer burn
4. Q fever
5. Sulfur stinker
6. Bone darkening
7. Brucellosis
8. TB
9. Bone taint
10. Anthrax

a) *Bacillus Anthracis*
b)*Clostridium thermosaccharolyticum*
c) Common in young chicken
d) *Clostridium nigrificans*
e) Cured and smoked ham
f) *Coxiella burnetti*
g) Longer storage of meat at freezing
h) Aphthus virus
i) *B.abortus*
j) *Mycobacterium tuberculosis*

Ans: 1. b 2. h 3. g 4. f 5. d
6. c 7. i 8. j 9. e 10. a

VII)

1. Abnormal odour	a) Fungoid growth
2. Sausage	b) Jewish method
3. Turkey egg kidney of pigs	c) Nitrosomyoglobin
4. Roped poultry	d) Canning
5. Whisker	e) Ascaris suum
6. Terepha	f) Cysticercus cellulosae
7. Curing	g) No AME/PME
8. Hydrogen swell	h) Salmonellosis
9. Milk spots	i) Botulism
10. Measly pork	j) Boiling test

Ans: 1. j 2. i 3. h 4. g 5. a
6. b 7. c 8. d 9. e 10. f

VIII)

1. Slaughter spleen	a) pH 5.5
2. Missed shock	b) Bleeding efficiency
3. Bone taint	c) Spherophorus necrophores
4. Whisker	d) pH 6.8
5. Turkey egg kidney of pig	e) Frozen meat
6. Plum pudding liver	f) Salmonellosis
7. DFD	g) Pithing
8. PSE	h) Deep seated anaerobic meat spoilage
9. Nitrazine yellow test	i) Electrical stunning
10. Malachite green test	j) pH of meat

Ans: 1. g 2. i 3. h 4. e 5. f
6. c 7. d 8. a 9. j 10. b

IX)

1. MBRT	a) *Y.enterocolitica*
2. BIS	b) *M.paratuberculosis*
3. Histidine poisoning	c) Sterilised milk
4. Crohn's disease	d) Whey
5. Turbidity	e) Microbiological standards
6. Brucellosis	f) Platform test
7. Phages	g) *S.pyogenes*
8. Pseudoappendicitis	h) Bacterial dehydrogenase activity
9. COB	i) ABRT
10. Scarlet fever	j) Lactic acid bacteria

Ans: 1. h 2. e 3. j 4. b 5. c
6. i 7. d 8. a 9. f 10. g

X)

1. Sulphur stinker	a) Tuberculosis
2. Whisker	b) Oesophagostomum
3. Melachite green	c) Captive bolt pistol
4. Nitrazine yellow	d) Anthrax
5. Slaughter spleen	e) Mould
6. Sarcocystis	f) pH test
7. Humane slaughter	g) Bleeding test
8. Pimply gut	h) Clostridium nigrificans
9. Pearl's disease	i) Miescher's tubes
10. Strawberry lymph nodes	j) Pithing

Ans: 1. h 2. e 3. g 4. f 5. j
6. i 7. c 8. b 9. a 10. d

XI)

1. Direct microscopic count	a) Silage disease
2. Cellulose asbestos	b) Nesslers' reagent
3. Urea	c) Newmanns' stain
4. Pasteurised milk	d) Air sanitation in dairy plant
5. Listeriosis	e) Cold chain
	f) Thermophilic
	g) Preservative

Ans: 1. c 2. d 3. g 4. e 5. a

XII)

a) Europe and USA	1. One medicine concept
b) China	2. Zoonoses
c) SEAR	3. Disease eradication
d) Asia and Africa	4. Bat rabies
e) India	5. Dog rabies
f) England	6. KFD
g) Daniel Salmon	7. SARS
h) Bernard Bang	8. Bird flu
i) Calvin schwabe	9. BSE & nv CJD
j) Rudolf virchow	10. Tuberculin test

Ans: a) 4 b) 8 c) 3 d) 7 e) 6
f) 9 g) h) i) 1 j) 2

XIII)

1. Juvenile hormone	a. Coulomb
2. Juvenile water	b. Smoke with Dust
3. Smust	c. Horrock' s apparatus
4. Sullage	d. Ecdysones
5. Greenhouse Effect	e. Waste water devoid excreta
6. Ozone hole	f. Oxides of sulphur and nitrogen
7. OT test	g.. Under ground water
8. Acid rain	h. Duck weed plant
9. Phytoremediation	i. Chlorofluorocarbons
10. Roentgen	j. Global warming

Ans: 1. d 2. g 3. h 4. e 5. j
6. i 7. c 8. f 9.h 10. a

CHAPTER 14
VETERINARY SURGERY & RADIOLOGY

I. Choose the correct answer:

1. Sit fast is caused by constant irritation of
   a) Saddle b) Collar
   c) Body d) Yoke

2. When the fractured fragments lie side by side it is called
   a) Distracted fracture b) Dentate fracture
   c) Oblique fracture d) Over-riding fracture

3. Paralysis of hind limbs is called
   a) Hemiplegia b) Quadruplegia
   c) Paraplegia d) Palsy

4. Wounds on mucous membrane heal
   a) Slowly b) Quickly
   c) Very rapidly d) Don't heal

5. Ranula is
   a) An internal hernia b) Haematoma
   c) A cyst d) A fistula

6. The least toxic of the following is
   a) Cocaine b) Procaine
   c) Lignocaine d) Bupivacaine

7. Exposure of the following to air produce phosgene
   a) Chloroform b) Ether
   c) Halothane d) Chloral hydrate

8. An example for field block is
   a) Ring block b) Cup block
   c) Inverted L block d) All

9. Laughing gas is
   a) N_2O b) NH_3
   c) NO_2 d) CO_2

10. Basal narcotic used in cattle is
    a) Bupivacaine b) Chloral hydrate
    c) Intraval sodium d) N_2O

11. Who introduced the theory and practice of asepsis in surgery
    a) W.S. Halstead b) Joseph Lister
    c) W.T.G. Morten d) Michal Harward

12. The Catgut is chromicised because
    a) To increase the functional strength
    b) To become noncapillary
    c) To handle easily
    d) To lessen irritation to the tissues and to delay absorption

13. Haematocele is a condition of bleeding into
    a) Peritoneal cavity
    b) Abdominal cavity
    c) Uterus
    d) Tunica Vaginalis

14. Dose of Doxapram hydrochloride to stimulate ventilation is
    a) 1-4 mg/kg body wt. i/v
    b) 4-8 mg/kg body wt. i/m
    c) 10-15 mg/kg body wt. i/v
    d) 1-2 mg/kg body wt. i/m

15. A local anaesthetic employed in dental surgery is
    a) Lidocaine
    b) Bupivacaine
    c) Propoxycaine
    d) Dibucaine

16. It is an alpha – 2 Adrenoceptor agonist used for preanaesthetic medication
    a) Ketamine
    b) Xylazine
    c) Thiopentone Sodium
    d) Triflupromazine

17. It is a decubitus ulcer
    a) Tuberculous ulcer
    b) Corneal ulcer
    c) Bed sore
    d) Vericose ulcer

18. It is a depolarizing muscle relaxant
    a) Pancuronium
    b) Suxamethonium
    c) Succinyl choline
    d) Gallamine

19. The drug of choice to treat burns locally
    a) 2% Hydrochloric acid
    b) 10% formaline
    c) 2% tannic acid
    d) 1% Potassium permanganate

20. Fracture of olecranon process is an example for
    a) Distracted fracture
    b) Depressed fracture
    c) Compression fracture
    d) Avulsion fracture

21. Perineal hernia occurs in
    a) Young male dogs
    b) Uncastrated male dogs
    c) Old uncastrated male dogs
    d) Only in female dogs

22. Autoclaving of instruments is done at
    a) 150°C
    b) 250°C
    c) 121°C
    d) 121°F

23. Synthetic absorbable suture is
    a) Polypropylene
    b) Caprolactum
    c) Polyglactin 910
    d) Polyamides

24. The treatment of choice to relieve pain in acute inflammation
a) Cautery
b) Massage
c) Scarification
d) Cold and astringent

25. The agent used to absorb carbondioxide during closed circuit anaesthesia is
a) Soda lime
b) Sodium thiosulphate
c) Sodium chloride
d) Sodium oxalate

26. The choice of drug for restraining elephant is
a) Ketamine
b) Thiopentone
c) Etorphine
d) Suxamethonium

27. Bradycardia and second degree AV block is caused by overdosage of
a) Xylazine
b) Ketamine
c) Halothane
d) Chloral hydras

28. Amputation of horn in goat is performed by blocking
a) Cornual nerve
b) Infratrochlear
c) a and b
d) Ring block

29. Telazol is a combination of
a) Opioid analgesic and a tranquilizer
b) Dissociative anaesthetic and a tranquilizer
c) Short acting barbiturate and a tranquilizer
d) Muscle relaxant and a tranquilizer

30. It is a basal narcotic drug used in large animals
a) Magnesium sulphate
b) Thiamylal
c) Chloral hydras
d) Pethedine

31. White shoulder with black body is the colour coding for
a) Oxygen cylinder
b) Carbondioxide cylinder
c) Nitrous oxide cylinder
d) Ammonia cylinder

32. The lubricants used in the anesthetic machine and oxygen cylinders is
a) Oil
b) Greese
c) Teflon
d) Vaslane

33. In canines the size of the endotracheal tubes ranges from
a) 2 to 4 mm
b) 4 to 14 mm
c) 14 to 36 mm
d) None of the above

34. Ketamine anaesthesia causes
a) Increase in heart rate
b) Provide muscle relaxation
c) Abolishes salivation
d) None of the above

35. Tachycardia during anaesthesia indicates
a) Light level of anaesthesia
b) Terminal hypoxia
c) Deep level of anaesthesia
d) None of the above

36. DCP is indicated in
a) Diaphyseal fracture
b) Epiphyseal fracture
c) Metaphyseal fracture
d) Fracture of skull bones

37. Cortisones are contraindicated in the treatment of
a) Cardiogenic shock
b) Hypovolemic shock
c) Septic shock
d) All the above

38. Perineal hernia is commonly encountered in
a) Castrated young dogs
b) Uncastrated old dogs
c) Spayed female dogs
d) In pregnant dogs

39. Commonly employed scrubbing agent
a) Ethylene oxide
b) Gluteraldehyde
c) Chlorhexidine
d) Chloramine

40. Bard Parker handle No.3 will accommodate blade size
a) 15
b) 20
c) 22
d) 50

41. Reduction in blood volume during burns is from
a) Plasma loss
b) Blood loss
c) Water loss
d) None of the above

42. Cosmetic surgery is surgery performed to
a) Replace the lost parts
b) Improve appearance
c) Conserve damaged tissue
d) Remove dead tissue

43. Haemorrhage during the surgery can be controlled by
a) Ligation
b) Cautery
c) Artery forceps
d) All the above

44. U-V Irradiation is used for sterilization of
a) Cotton and sutures
b) Operating theatre
c) Fibroptic instrument
d) Glasswares

45. When boiling water is used for sterilization the sharp instruments must be
a) Wrapped in paper
b) Wrapped in towel
c) Wrapped in cotton
d) Wrapped in rubber sheet

46. Wound dehiscence is caused by
a) Early absorption of suture
b) Delayed absorption of sutures
c) Movement of the patient
d) Necrosis of the tissues

47. Deep seated abscess terminate by
a) Inspissation of pus
b) Calcification
c) Encapsulation
d) All the three

48. Cellulitis is inflammation of
a) Subcutaneous tissue
b) Facia
c) Muscles
d) Mucosa

49. Anaphylactic shock develops when the animal is exposed to
a) Protein
b) Vasoactive drugs
c) Depressants
d) Irritants

50. Furunculosis is characterized by a group of boil on
a) Different parts of body
b) Axilla and groin
c) Vicinity of joints
d) Face and neck

51. A haemostatic agent used to control bleeding during surgery is by
a) Haemocoagulase injection
b) Tr.benzoin application
c) Sodium citrate injection
d) Tr.Iodine application

52. Ideal fluid used to restore fluid volume in burn shock is
a) Whole blood
b) Plasma
c) Dextran
d) Isotonic Saline

53. Drug used for reviving respiratory arrest during anaesthesia in dog is
a) Doxapram
b) Dopamine
c) Atropine
d) Adrenalin

54. Sterilization of operation theatre is done by
a) Nitrous oxide gas
b) Steaming
c) Ethylene oxide gas
d) UV Irradiation

55. A cyst is different from other similar swellings in being
a) Inflammatory
b) Non inflammatory
c) Hard in Consistency
d) Soft in consistency

56. A drug which has got similar action on the heart as that of Atropine sulphate is
a) Xylazine
b) Glycopyrrolate
c) Diazepam
d) Doxapram

57. Petersons block is an anaesthetic technique used for anaesthetizing the
a) Eye ball
b) Upper eye lid
c) Ear
d) Lower eye lid

58. Myringotomy is an operation indicated for
a) Otitis externa
b) Otitis media
c) Otitis interna
d) Haematoma auris

59. Hobdaying is a treatment for
a) Oesophageal stenosis
b) Pyloric stenosis
c) Roaring
d) Empyema of guttural pouch

60. Tension band wiring technique is recommended for
a) Impacted fracture. b) Distracted fracture
c) Overriding fracture d) Dentate fracture

61. The biological effect of radiation utilized in radiation therapy is its property of causing
a) Deep penetration b) Cell death
c) Mutation d) Ionisation

62. Drainage from pericardial sac in cattle is carried out through
a) Right 5th rib resection b) Right 7th intercoastal space
c) Left 5th rib resection d) Left 7th intercoastal space

63. Enteroplication of intestine in dog is a treatment for
a) Volvulus b) Intestinal obstruction
c) Intussusception d) Inguinal hernia

64. Shoe boil is a condition usually seen in
a) Horses b) Goats
c) Cows d) Pigs

65. Radiographic appearance of foreign body obstruction of pylorus in dog is
a) Distension of stomach b) Distended intestinal loops
c) Sacculations of intestinal loop d) Empty stomach

66. During closure of thoracotomy wound negative pressure in the pleural cavity is established to
a) Prevent hemorrhage b) Prevent exudation
c) Establish normal tidal volume d) Prevent lung oedema

67. A horse is said as broken down when it suffers from
a) Rupture of Achilles tendon b) Rupture of flexor tendon
c) Rupture of suspensory ligament d) Fracture of vertebral column

68. Synovitis of great sesamodean shealth is called as
a) Navicular disease b) Capped knee
c) Wind gall d) Bowed tendon

69. The prepucial diverticulum is seen in
a) Bull b) Dog
c) Pig d) Buck

70. Infra red radiation is employed
a) To improve the blood supply to a part b) To increase exudation
c) For antiseptic action d) To hasten granulation

71. Sweeny is a synonym used to denote
a) Radial paralysis b) Suprascapular paralysis
c) Ulnar paralysis d) Sciatic paralysis

72. Dropped sole is a symptom seen in
a) Chronic Navicular disease
b) Acute laminitis
c) Chronic laminitis
d) Quittor

73. Advantage of external skeletal fixation technique is
a) Joint mobility
b) Early callus formation
c) Minimum periosteal reaction
d) Minimum endosteal reaction

74. Surgery performed to remove root cause of disease is termed as
a) Radical surgery
b) Reconstructive surgery
c) Elective surgery
d) Plastic surgery

75. Most reliable method of haemostasis during surgery is by
a) Ligation of vessels
b) Tamponade
c) Thermo cautery
d) Mopping

76. In autoclaving, surgical instruments are sterilized by
a) Boiling in water
b) Steam
c) Steam under pressure
d) None of the above

77. Surgical gloves are be sterilised by
a) Autoclaving
b) Chemicals
c) Boiling in water
d) Hot air oven

78. Autoclaving of surgical instruments are carried out under
a) 121°C under 15 lbs pressure for 15 mts.
b) 350°C under 15 lbs pressure for 15 mts.
c) 150°C under 15 lbs pressure for 15 mts.
d) 250°C under 15 lbs pressure for 15 mts.

79. Haemorrhage from the eye can be controlled by instilling
a) Tr. Benzoin
b) Vit.K
c) Adrenalin
d) Local anaesthestic

80. For surgical scrubbing of hands, the antiseptic lotion used is
a) Cetrimide
b) Phenol
c) Boric acid
d) Perchloride of mercury

81. Respiratory arrest during anaesthesia in dog can be resuscitated by
a) Administration of oxygen
b) Compression of chest
c) Dilatation of anal sphincter
d) All the three

82. Best fluid for fluid therapy in burn shock in dog is
a) Plasma
b) Dextrose saline
c) Polyionic isotonic saline
d) Blood

83. An example for synthetic absorbable suture material is
a) Polyethylene
b) Prolene
c) Polyamide
d) Polyglycolic acid

84. Suture pattern for suturing the oesophageal wound is
a) Apposition
b) Eversion
c) Inversion
d) Relaxation

85. The synthetic absorbable suture material used for suturing laparotomy wound is
a) Cat gut
b) Polyglactin
c) Fascia lata
d) Vetafil

86. The relaxation cum apposition suture used to suture skin wound in dog is
a) Simple interrupted
b) Halstead
c) Gambee
d) Vertical mattress

87. In suturing of wounds in urinary bladder, the suture pattern used is
a) Cushing
b) Mattress
c) Crushing suture
d) Simple continuous

88. In first intention healing of wound in cattle, the skin sutures are removed on
a) 10th day
b) 12^{th} day
c) 7^{th} day
d) 20^{th} day

89. Smooth needles with tapering point is used to suture
a) Skin
b) Intestine
c) Fascia
d) Tendon

90. The suture pattern used for suturing abomasal wound is
a) Cushing suture
b) Lembert suture
c) Halstead suture
d) Connell suture

91. White lotion is prepared out of
a) Magnesium sulphate and glycerine
b) Lead acetate and zinc sulphate
c) Ferrous sulphate and zinc sulphate
d) Boric acid and Zinc oxide

92. Cold and astringent application in inflammation is used for
a) Suppression of exudation
b) Favour reabsorption of exudate
c) To localise inflammatory process
d) Alleviate pain

93. Maturation of abscess is favoured by the use of
a) Tr. Iodine
b) Tr. benzoin
c) Iodine ointment
d) Magsulph- glyerine paste

94. A cyst differs from other similar swelling in that it is
a) Painfull
b) Hard to touch
c) Non-inflammatory
d) Inflammatory

95. A fresh, sutured wound heals by
a) First intention
b) Scab formation
c) Second intention
d) Mixed intention

96. Vitamin C is essential in would healing as it favour
a) Collagen formation
b) Fibroblast proliferation
c) Contraction of fibroblast
d) Maturation of collagen

97. Shock develops when the loss of blood is above
a) 25%
b) 15%
c) 5%
d) 10%

98. Haemorrhagic shock is managed by administration of
a) Whole blood
b) Plasma
c) Dextrose
d) Normal saline

99. Ideal fluid for administration during elective surgery is
a) Whole blood
b) 5% dextrose
c) 10% dextrose
d) Polyionic isotonic solution

100. The major metabolic change noticed in shock is
a) Alkalosis
b) Hypoxia
c) Acidosis
d) None of these

101. The colloid used to counteract dehydration is
a) Whole blood
b) Dextran
c) Dextrose
d) Plasma

102. The site of caudal epidural injection in cattle is
a) First intercoccygeal space
b) Lumbo sacral space
c) Between last two lumbar vertebrae
d) Between L_1 and L_2 vertebrae

103. Site of epidural injection in goat is
a) Lumbosacral space
b) Sacro coccygeal space
c) 1st intercoccygeal
d) Between 1st two lumbar vertebrae

104. Atropine is used as pre-anaesthetic in general anaesthesia for
a) Reducing the heart rate
b) Reducing the secretions
c) Reducing metabolism
d) Muscle relaxation

105. The main reason for atropine premedication in xylazine anaesthesia is to
a) Reduce salivation
b) Muscle relaxation
c) Prevent bradycardia
d) Hasten sedation

106. An intra muscular general anaesthetic agent used in cat is
a) Diazepam
b) Xylazine
c) Ketamine
d) Siquil

107. The preanaesthetic dose of xylazine in dog is
a) 0.05- 0.1 mg/kg body weight
b) 6-8 mg/kg body weight
c) 1-2 mg/kg body weight
d) 5-10 mg/kg body weight

108. Radiographic technique for suspected metalic foreign body in the stomach of a dog is
a) Survey radiography
b) Barium contrast
c) Double contrast
d) Pneumoperitoniography

109. For oesophagraphy, for suspected case of stricture, barium is used as
a) Thick paste
b) Liquid
c) Thick suspension
d) None of these

110. A good quality radiograph should have an image with
a) Good defenition
b) Good detail
c) Proper scale of contrast
d) All the three

111. An ionic contrast medium used for urinary system is
a) Hypaque
b) Omnipaque
c) Amipaque
d) Biligraphin

112. A non-ionic contrast medium used for myelography
a) Trazograph
b) Omnipaque
c) Hypaque
d) Sod. iopodate

113. The reducing agent in the developing solution used for X-ray processing is
a) Sodium thiosulphate
b) Ammonium thiosulphate
c) Hydroquinone
d) Sodium sulphite

114. The biological effect of radiation to the tissue is by
a) Arrest of cell mutliplication
b) Causing cell death
c) Mutation
d) All the three

115. Biological effect of X-ray used for treatment of cancer is based on its affinity towards
a) Degenerating cells
b) Fast multiplying cells
c) Regenerating cells
d) Blood cells

116. Intravenous pyelography is a radiographic technique used to diagnose
a) Urethral calculi
b) Cystic calculi
c) Kidney function
d) Bladder emptying

117. In male dogs, the common site of lodging of urethral calculi is
a) Bladder neck
b) At the level of ischeal arch
c) Just behind the level of *os penis*
d) At the pelvic urethra

118. In buck, urethral calculi are usually lodged at the
a) Ischeal urethra
b) Bladder neck
c) Sigmoid flexure
d) Urethral process

119. Perineal hernia in large animal is met with in
a) Cows
b) He buffaloes
c) Bullocks
d) Bulls

120. The most common complication in mid ventral abdominal laparotomy in dog is
a) Adhesion
b) Incisional hernia
c) Fibrosis of suture line
d) Self mutilation

121. Caudal thoracic oesophagotomy in dog is performed through
a) 6th intercostal space
b) 8th intercostal space
c) 4th intercostal space
d) 5th intercostal space

122. Shoe boil is a condition of horse, affecting the
a) Point of elbow
b) Posterior hock region
c) Anterior knee region
d) Anterior stifle region

123. Friebel's apparatus is indicated in the treatment of
a) Quittor
b) Seedy toe
c) Knucking
d) Sectioning of flexor tendon

124. Pannus is a symptom of
a) Cataract
b) Glaucoma
c) Retinitis
d) Keratitis

125. Ptosis is a symptom due to the paralysis of
a) Auriculo palpebral nerve
b) Infra orbital nerve
c) Optic nerve
d) Mandibular nerve

126. Sweeny is a disease condition due to paralysis of
a) Radial nerve
b) Anterior tibial nerve
c) Supra scapular nerve
d) Sciatic nerve

127. The scattering of x-rays from the tube is prevented by the use of
a) Lead outer cover
b) Diaphragm
c) Cone
d) Grid

128. In radiographic parameters, one of the following is considered constant
a) Time
b) Part film distance
c) Kilo voltage peak
d) Milliamperage seconds

129. Staphyloma is a sequelae of
a) Conjunctivitis
b) Cataract
c) Iridocyclitis
d) Corneal ulcer

130. Increase in intraoccular pressure is called
a) Cataract
b) Glaucoma
c) Hydrophthalmos
d) None of these

131. Radiographic appearance of foreign body obstruction of pylorus in dog is
a) Distension of stomach
b) Distended intestinal loops
c) Sacculations of intestinal loop
d) None of these

132. Collimator in an x-ray machine is used to decide the
a) Field of radiation
b) Distance of X-rays
c) Type of radiation
d) Direction of x-rays

133. Ramstedt's operation is done in
a) Achalasia
b) Stricture of lower oesophageal sphincter
c) Stricture of colon
d) Pyloric stenosis

134. Hobdaying is an operation indicated for
a) Stenosis of oesophagus
b) Paralyais of recurrent laryngeal nerve
c) Stenosis of pylorus
d) Ablation of ear canal

135. Viability of the intestinal loop can be assessed by observing
a) Colour of affected loop
b) Mesenteric pulsation
c) Pinching the walls
d) All the three

136. Hyovertebrotomy is an operation indicated for
a) Intervertebral disc disease
b) Fracture of vertebrae
c) Empyema of guttural pouch
d) Empyema of frontal sinus

137. Widening the hernial ring is called
a) Canthotomy
b) Kelotomy
c) Coeliotomy
d) Commissurotomy

138. During closure of thoracotomy wound negative pressure in the pleural cavity is to be established to avoid
a) Collapse of lung
b) Pleural effusion
c) Lung adhesion
d) None of these

139. Heller's myotomy operation is indicated for
a) Chalasia of oesophagus
b) Pyloric stenosis
c) Megacolon
d) Stricture of lower oesophageal sphincter

140. Myringotomy is an operation indicated for
a) Otitis externa
b) Otitis media
c) Otitis interna
d) Haematoma auris

141. A horse is said as broken down when it suffers from
a) Rupture of achilles tendon
b) Rupture of flexor tendon
c) Rupture of suspensory ligament
d) Fracture of vertebral column

142. Screwing of the front limb while turning the animal is a characteristic symptom in
a) Buttress foot
b) Seedy toe
c) Navicular disease
d) Ring bone

143. An osteoarthritic condition affecting only the hind limb in horses
a) Splint
b) Spavin
c) Quittor
d) Keratoma

144. Cunean tenotomy is a surgical treatment recommended for
a) Stringhalt
b) Bog spavin
c) Bone spavin
d) Curb

145. Tenotomy of flexor tendon is a treatment indicated in
a) Sprain
b) Knuckling
c) Buttress foot
d) Curb

146. Common seat of oesophageal obstruction in cattle is at
a) Cervical oesophagus
b) Thoracic oesophagus
c) Gastro oesophageal junction
d) All the three

147. Pyloric stenosis in dog is treated by
a) Pyloromyotomy
b) Gastrotomy
c) Enterotomy
d) Gastric lavage

148. Plication of intestine in dog is a treatment for
a) Volvulus
b) Torsion
c) Intussusception
d) Hernia

149. Paatsama's operation is indicated for the treatment of
a) Blemished knee
b) Rupture of anterior cruciate ligament
c) Knuckling
d) Spavin

150. For removal of foreign body from the pericardial sac in cattle, approach is made through
a) Resection of 5th rib
b) 8th intercostal space
c) 6th intercostal space.
d) 4th intercostal space

151. In pervious urachus the animal passes urine through
a) Umbilicus
b) Prepuce
c) Vulva
d) Anus

152. Perineal hernia is usually met with in
a) Castrated old dogs
b) Un castrated young dogs
c) Un castrated old male dogs
d) Adult female dogs

153. Devita's method is one of the treatment recommended for
a) Hip dysplasia
b) Fracture of femur head
c) Hip dislocation
d) Fracture of pelvis

154. Utrecht's method of omentopexy is a treatment recommended for
a) Abomasal displacement
b) Gastric dialatation
c) Caecal dialatation
d) Recto vaginal fistula

155. In shortwave diathermy thermal energy in tissue is produced by
a) High frequency electromagnetic radiation
b) Low frequency electromagnetic radiation
c) High frequency alternating currents
d) Low frequency alternating current

156. Micromassage is a terminology used to
a) Gentle massaging of the tissues with hours
b) The effect of the untrasound waves in the cells when used for treatment
c) Heating of the tissue with IR light
d) Heating the tissue by ultraviolet ray

157. Fracture healing occurs earlier in
a) Transverse fracture
b) Oblique fracture
c) Spiral fracture
d) Multiple fracture

158. Sweeny is a synonym used to denote
a) Radial paralysis
b) Suprascapular paralysis
c) Ulnar nerve paralysis
d) Sciatic paralysis

159. Dropped sole is a symptom seen in
a) Chronic Navicular disease
b) Acute laminitis
c) Chronic laminitis
d) Quittor

160. Intervertebral disc disease is most frequently encountered in
a) Dachshund
b) Cocker Spaniel
c) Labrador Retriever
d) Chinese Pug

161. The main disadvantage of intramedullary pinning of tibia is the lack of
a) Rotational stability
b) Shear force
c) Axial compression
d) Bending stability

162. During Thiopentone anaesthesia in dog, the plane of surgical anaesthesia is indicated by the abolition of
a) Pedal reflex
b) Pupillary reflex
c) Palpebral reflex
d) Ear wisker reflex

163. The 'U' shape of foot is changed to 'V' shape in
a) Ring Bone
b) Bobba bone
c) Pyramidal disease
d) Navicular Disease

164. For sub luxation of patella in cattle, desmotomy of the ligament is done on
a) Middle straight ligament
b) Medial straight ligament
c) Lateral straight ligament
d) Cruciate ligament.

165. ..... is considered as an ideal suture material
a) Polyglactin 910
b) PDS
c) Nylon
d) Catgut

166. Suture needles with longitudinal grooves are called ..... needles
a) Grooved
b) Corrugated
c) Ribbed
d) Swaged

167. Tendency of a suture material to revert to its original configuration when left free is called
a) Resilience
b) Stubbornness
c) Tensile strength
d) Memmory

168. Father of veterinary radiology is
a) Roentgen
b) Eberlein
c) Kirschner
d) Slater

169. ..... is the least thrombogenic suture material
a) Polypropylene
b) Nylon
c) PDS
d) Polyglycolic acid

170. Reverse cutting needles have their cutting edge on the
a) Convex side
b) Concave side
c) Eyed end
d) Swaged end

171. Surgical anaesthesia produced by combining two or more drugs or anaesthetic techniques is called
a) Combination anaesthesia
b) General anaesthesia
c) Basal anaesthesia
d) Balanced anaesthesia

172. ..... is an example of a dissociative anaesthetic
a) Xylazine
b) Tiletamine
c) Propofol
d) Pentabarbitone

173. The dose of glycopyrrolate in dogs is
a) 0.011mg/kg
b) 0.001 mg/kg
c) 0.11 mg/kg
d) 1. 01 mg/kg

174. ..... is contraindicated as preanaesthetic medication in animals with a history of epilepsy
a) Diazepam
b) Zolazepam
c) Triflupromazine
d) Xylazine

175. ..... is an example of an alpha adrenergic agonist
a) Triflupromazine
b) Diazepam
c) Xylazine
d) Alphadolone

176. Magda method is otherwise known as
a) Proximal paravertebral nerve block
b) Farquharson's method
c) Hall method
d) Distal paravertebral nerve block

177. Antidote for xylazine is
a) Doxapram
b) Coramine
c) Yohimbine
d) Atropine

178. ..... has the least cardiotoxic effect
a) Isoflurane
b) Halothane
c) Methoxyflurane
d) Xylazine

179. Example of an intrapelvic hernia is
a) Perineal hernia
b) Ventral hernia
c) Inguinal hernia
d) Gut tie

180. Hernia most common in old uncastrated male dogs is
a) Perineal hernia
b) Scrotal hernia
c) Prostatic hernia
d) Crural hernia

181. A type of fracture in which part of a bone fragment gets pulled away from the parent bone due to contraction of an associated tendon is
a) Complicated fracture
b) Compound fracture
c) Avulsion fracture
d) Comminuted fracture

182. A type of fracture in which a bone is divided into three or more fragments and the fracture lines meet is called
a) Compound fracture
b) Multiple fracture
c) Fissured fracture
d) Comminuted fracture

183. ..... is used for controlling haemorrhage from cut surface of bones
a) Bone seal
b) Bone wax
c) Bone cement
d) Bone powder

184. Plastic hypodermic syringes are sterilized generally using
a) Gluteraldehyde
b) Autoclaving
c) Ethylene oxide
d) Isopropyl alcohol

185. Catgut is prepared from ..... of intestine
a) Mucosa
b) Submucosa
c) Muscular layer
d) Serosa

186. ..... is a suturing technique for tendons
a) Tension band wiring
b) Parker-Kerr
c) Bunnel-Meyer
d) Schmeiden

187. Healing by granulation is
a) Ist intention
b) IInd intention
c) IIIrd intention
d) IVth intention

188. ..... is the most widely recommended prophylactic antibiotic in surgery
a) Strepto-penicillin
b) Gentamicin
c) Cefazolin
d) Enrofloxacin

189. ..... is a topical agent of choice in burn injuries
a) Silver sulfadiazine
b) Silver sulfasalazine
c) Povidone iodine
d) Mupirocin

190. .....invented grid
a) Gustav Bucky
b) Hollins Potter
c) Thomas Becquerel
d) Wilhem Roentgen

191. Computed tomography uses
a) Magnetic waves
b) Digital radiation
c) X-rays
d) Radio waves

192. The energy level of X-rays is
a) 25-125 keV
b) 125-225 keV
c) 2.5 to 12.5 keV
d) 0.25-1.25 keV

193. Melting point of Tungsten is
a) 3370°F
b) 2370°F
c) 3370°C
d) 2370°C

194. The recommended FFD in veterinary radiography is
a) 90-100 cm
b) 9-10 cm
c) 0 cm
d) 90-100 m

195. Quality of X-rays is influenced by
a) Time
b) mA
c) mAs
d) kV

196. The silver halide in X-ray film is in the form of small crystals of
a) Silver iodoboride
b) Silver chlorobromide
c) Silver iodobromide
d) Silver iodofluride

197. Most scatter radiation in diagnostic radiology is due to
a) Roentgen effect
b) Carter effect
c) Cannon effect
d) Compton effect

198. Grid is used when the thickness of the part is more than
a) 1cm
b) 10cm
c) 50cm
d) 100cm

199. The reducing agent in developer is
a) Hydroquinone
b) Sodium sulphite
c) Sodium thiosulphate
d) Sodium carbonate

200. A non-ionic iodine containing contrast agent is
a) Meglumide
b) Metrizamide
c) Iothalmate
d) Povidamide

201. Recommended age for ear cropping in dog is
a) 8-10 days
b) 8-10 weeks
c) 8-10 months
d) 3-5 days

202. The site for docking in boxers is
a) 1st intercoccygeal space
b) 2nd intercoccygeal space
c) Half of the tail
d) Retain two third of tail

203. Ingrowth of blood vessels into the cornea is called
a) Limbus
b) Hyphema
c) Pannus
c) Macula

204. Anterior synechia is adhesion of cornea with
a) Palpebral conjunctiva
b) Bulbar conjunctiva
c) Iris
d) Sclera

205. Lendectomy using ultrasound is called
a) Ultrasonectomy
b) Lithotripsy
c) Acoustic ablation
d) Phacoemulsification

206. Dental fistula in dogs involves upper ..... tooth
a) 1st premolar
b) 2nd premolar
c) 3rd premolar
d) 4th premolar

207. Prolapse of iris through corneal ulcer is called
a) Keratocele
b) Hypopyon
c) Anterior synechia
d) Staphyloma

208. In othaematoma the swelling is usually seen on
a) Concave side
b) Convex side
c) Both sides
d) None of above

209. Vertical Ear Canal Ablation is a method of treatment of
a) Otitis externa
b) Otitis media
c) Otitis interna
d) Autism

210. Salivary mucocele is otherwise known as
a) Salivoma
b) Ranula
c) Pannus
d) Antibioma

211. Difference in intensity across the X-ray beam is called
a) Kneil effect
b) Knee effect
c) Heel effect
d) Keel effect

212. A drug used in treatment of glaucoma is
a) Acetaminophen
b) Acetazolamide
c) Acetylsalicylic acid
d) Aceturate

213. V-Y plasty is used for
a) Entropion
b) Ectropion
c) Symblepharon
d) Ankyloblepharon

214. Inflammation of the vascular tunic of eye is called
a) Keratitis
b) Hyalitis
c) Gonitis
d) Uveitis

215. For traumatic reticulo pericarditis, the pericardium is approached by resection of
a) 4th rib
b) 5th rib
c) 6th rib
d) 7th rib

216. ..... suture technique is used for fixing thoracostomy tube to the thoracic wall
a) Purse string
b) Chinese finger trap
c) American hand cuff
d) Bard Parker

217. Fixing of an abdominal organ to the abdominal wall is called
a) Abdominocentesis
b) Celiotomy
c) Ventropexy
d) Canthotomy

218. Surgical enlargement of the hernial ring is called
a) Herniorrhaphy
b) Hernioplasty
c) Kelotomy
d) None

219. During ventral median laparotomy linea alba is most easily identified at the
a) Xiphoid region
b) Umbilicus
c) Prepubic region
d) Pubic region

220. Localized peritonitis is characteristic of
a) Man
b) Dog
c) Horse
d) Cow

221. In Cakala method the spinal nerves desensitized are
a) T13, L1 & L2
b) L1, L2 & L3
c) L2, L3 & L4
d) L1, L2 & L4

222. In cows caesarean section is generally performed by incising
a) Ventral midline
b) Right flank
c) Left flank
d) Perineal

223. Oscheocele is a hernia seen at
a) Inguinal region
b) Scrotal sac
c) Crural canal
d) Perineal region

224. Pylorectomy and gastroduodenostomy is a technique done by
a) Billroth I
b) Billroth II
c) Billroth III
d) Billroth none

225. Transverse pyloroplasty is otherwise known as ..... technique
a) Heineke-Mikulicz
b) Billroth I
c) Fredet-Ramstedt
d) Boehringer

226. Marsupialization is a method of managing
a) Intussusception
b) GDV
c) Pyometra
d) Gastric ulcer

227. "Double Bubble" is a characteristic radiographic appearance in
a) GDV
b) Intussusception
c) Gastric foreign body
d) Intestinal foreign body

228. Thomas splint is an example of
a) External skeletal fixation
b) External coaptation
c) AO-ASIF technique
d) None

229. The most common type of hip dislocation in dogs is
a) Cranio-dorsal
b) Caudo-dorsal
c) Cranio-ventral
d) Obturator

230. The part of intestine that goes into an intussuscepted segment is called
a) Intussusceptum
b) Intussuscepiens
c) Enterolith
d) Intussuscepticum

231. Inability of the protruded penis to retract into the prepuce is called
a) Phimosis
b) Paraphimosis
c) Peorrhexia
d) None

232. Sling used for treating hip dislocation in dogs is
a) Schroeder
b) Velpeau
c) Thomas
d) Ehmer

233. Common seat of urethral obstruction in goats is
a) Ischeal arch
b) Sigmoid flexure
c) Glans penis
d) Urethral process

234. Hernial content in epiplocele is
a) Intestine
b) Omentum
c) Epiglottis
c) Mesovarium

235. Chondrodystrophoid breeds of dogs commonly suffer from IVDD of
a) Hansen Type I
b) Hansen Type II
c) Hansen Type III
d) Hansen Type IV

236. For Patellar desmotomy in bullocks, the ligament severed is
a) Middle
b) Median
c) Medial
d) Lateral

237. The type of hip dysplasia in which increase in the angle of the neck of femur is called
a) Coxa valga
b) Coxa vara
c) Coxa plana
d) Toxa cara

238. Anterior drawer movement is elicited in the rupture of
a) Cranial cruciate ligament
b) Caudal cruciate ligament
c) Collateral ligament
d) Femoropatellar

239. Positive Ortolani sign is characteristic of
a) Hip dislocation
b) Hip dysplasia
c) Elbow dislocation
d) Elbow dysplasia

240. In buck, urethral calculi are usually lodged at the
a) Ischeal urethra
b) Bladder neck
c) Sigmoid flexure
d) Urethral process

241. Caudal thoracic oesophagotomy in dog is performed through
a) 6th intercostal space
b) 8th intercostal space
c) 4th intercostal space
d) 5th intercostal space

242. Surgery performed for correction of deformities
a) Radical surgery
b) Reconstructive surgery
c) Elective surgery
d) Plastic surgery

243. A method of haemostasis from deep seated heamorrhage
a) Ligation
b) Tamponade
c) Thermo cautery
d) Mopping

244. A most efficient procedure for sterilization of surgical materials
a) Boiling in water
b) Autoclaving
c) Hot air oven
d) Irradiation

245. Surgical scrubbing of skin with brush should be done for
a) 5 times
b) 10 times
c) 15 times
d) 20 times

246. For IR irradiation, the source should be kept from the affected area for distance of
a) 3 feet
b) 6 feet
c) 1 foot
d) 10 feet

247. Capillary bleeding can be controlled by topical application of
a) Hydrogen peroxide
b) Haemo-coagulase
c) Local anaesthetics
d) Heparin

248. Haemorrhage from the eye can be controlled by instilling
a) Tr. Benzoin
b) Vit.K
c) Adrenalin
d) Local anaesthestic

249. A lotion used for irrigation of the eye in conjunctivitis
a) Cetrimide
b) Phenol
c) Boric acid
d) Perchloride of mercury

250. Paradoxical respiration is seen in
a) Thoracotomy wound
b) Pneumonia
c) Pericardial effusion
d) Diaphragmatic hernia

251. Most ideal parenteral fluid of choice for treatment in burn
a) Plasma
b) Dextrose saline
c) Polyionic isotonic saline
d) Blood

252. The size of chromic catgut for suturing of cornea in dog
a) No. 1
b) No. 1-0
c) No. 6-0
d) No-7

253. Gas sterilization of fibre optic articles is done by using
a) Nitrous oxide
b) Carbon monoxide
c) Ethylene oxide
d) Carbon dioxide

254. Round bodied needle with tapering point is used to suture
a) Skin
b) Intestine
c) Fascia
d) Tendon

255. Haemorrhagic shock is managed by administration of
a) Whole blood
b) Plasma
c) Dextrose
d) Normal saline

256. Ideal fluid for replacement in Hypovolemic shock is
a) Plasma
b) Polyionic isotonic solution
c) Dextrose saline
d) Whole blood

257. Ideal fluid for administration during elective surgery is
a) Whole blood
b) 5% dextrose
c) 10% dextrose
d) Polyionic isotonic solution

258. In circle system of inhalation anaesthesia carbon dioxide from exhailed gas is eliminated by
a) Exhaust valve
b) Rebreathing bag
c) Soda lime canister
d) Vapouriser

259. An intra muscular general anaesthetic agent for cat is
a) Diazepam
b) Xylazine
c) Ketamine
d) Siquil

260. The preanaesthetic dose of xylazine in dog is
a) 0.05- 0.1 mg/kg body weight
b) 6-8 mg/kg body weight
c) 1-2 mg/kg body weight
d) 5-10 mg/kg body weight

261. Nylon suture is closed as
a) Surgeon's knot
b) Granny knot
c) Tripple knot
d) Square knot

262. Radiographic technique for suspected metallic foreign body in the intestine of a dog
a) Survey radiography
b) Barium contrast
c) Double contrast
d) Pneumoperitoniography

263. A quality radiograph should possess
a) Good density
b) Proper thickness
c) Long scale of contrast
d) Short scale of contrast

264. An ionic contrast medium used for cystography is
a) Hypaque
b) Omnipaque
c) Amipaque
d) Biligraphins

265. A non-ionic contrast medium used for myelography
a) Trazograph
b) Omnipaque
c) Hypaque
d) Sod. iopodate

266. The clearing of non- reacted silver halide of X-ray film takes place during
a) Developing
b) Rinsing
c) Fixing
d) Washing

267. Pannus is a symptom in
a) Cataract
b) Glaucoma
c) Retinitis
d) Keratitis

268. Ptosis is a symptom due to the paralysis of
a) Auriculo palpebral nerve
b) Infra orbital nerve
c) Optic nerve
d) Mandibular nerve

269. The scattering of x-rays from the tube is prevented by the use of
a) Lead outer cover
b) Diaphragm
c) Cone
d) Grid

270. In radiography, one of the following parameters is kept constant
a) Time
b) Part film distance
c) Kilo voltage peak
d) Milliamperage seconds

271. Staphyloma develops as sequelae to
a) Conjunctivitis
b) Cataract
c) Iridocyclitis
d) Corneal ulcer

272. Increase in intraoccular pressure is termed as
a) Cataract
b) Glaucoma
c) Hydrophthalmos
d) Staphyloma

273. Collimator in an x-ray machine is used to decide the
a) Field of radiation
b) Distance of X-rays
c) Type of radiation
d) Penetration of x-rays

274. Hobdaying operation is indicated for
a) Stenosis of esophagus
b) Paralyais of recurrent laryngeal nerve
c) Stenosis of pylorus
d) Ablation of ear canal

275. Hyovertebrotomy is an operation indicated for
a) Intervertebral disc disease
b) Fracture of vertebrae
c) Empyema of guttural pouch
d) Empyema of frontal sinus

276. Widening the hernial ring is called
a) Canthotomy
b) Kelotomy
c) Coeliotomy
d) Commissurotomy

277. Myringotomy is an operation indicated for
a) Otitis externa
b) Otitis media
c) Otitis interna
d) Haematoma auris

278. Common seat of oesophageal obstruction in cattle
a) Cervical oesophagus
b) Thoracic oesophagus
c) Gastro oesophageal junction
d) Cardia

279. In Doberman, the ideal age for ear cropping is preferred during
a) 5-7 weeks
b) 10-12 weeks
c) 16-18 weeks
d) 20-22 weeks

280. Enamel hypoplasia in dog is seen associated with
a) Canine Hepatitis
b) Leptospirosis
c) Canine Distemper
d) Parvoviral Enteritis

281. Cornual nerve block is the ideal anaesthetic procedure in bovines for
a) Dehorning
b) Trephining of sinus
c) Horn amputation
d) Rhinotomy

282. The ventral border of Viborg's triangle is constituted by
a) Tendon of sternomaxillaris
b) Submaxillary vein
c) Bracheocephalicus muscle
d) Sterno-thyrohyoideus muscle

283. Zepp's operation is indicated as surgical treatment for
a) Otitis interna
b) Chronic otitis externa
c) Otitis media
d) Othaematoma

284. Exodontia of 4th upper cheek tooth is indicated in
a) Mandibular fracture
b) Epulis
c) Pus in the antrum
d) Stenotic nostril

285. Bulla osteotomy is done for the treatment of
a) Otitis interna
b) Chronic otitis externa
c) Otitis media
d) Othaematoma

286. Ear canalography is performed for assessing the integrity of
a) Ear ossicles
b) Tympanum
c) Semicircular canal
d) Chochlea

287. A horse is said as broken down when it suffers from
a) Rupture of Achilles tendon b) Rupture of flexor tendon
c) Rupture of suspensory ligament d) Fracture of vertebral column

288. An osteoarthritic condition affecting hock region in horses
a) Splint b) Spavin
c) Quittor d) Keratoma

289. Flail chest is condition due to
a) Fracture of more than one rib b) Fracture of rib in both sides
c) Simple fracture of adjacent ribs d) Fracture of adjacent ribs in more than one place

290. Racing joint is an osteoarthritic condition affecting the
a) Fetlock joint b) Carpal joints
c) Coronopedal joint d) Elbow joint

291. Synovitis of great sesamodean shealth is called as
a) Navicular disease b) Shoe boil
c) Wind gall d) Bowed tendon

292. Peroneal tenotomy is indicated for the treatment of
a) Stringhalt b) Bog spavin
c) Knuckling d) Curb

293. Tenotomy of flexor tendon is indicated for the treatment of
a) Sprain b) Knuckling
c) Buttress foot d) Curb

294. Pyloric stenosis in dog is treated surgically by
a) Ramstedt's operation b) Gastrotomy
c) Enterotomy d) Gastrostomy

295. Plication of intestine in dog is recommended as a treatment for
a) Volvulus b) Torsion
c) Intussusception d) Hernia

296. Plantar tenotomy is indicated for the treatment of
a) Spavin b) Knuckling
c) Patellar luxation d) Stringhalt

297. In pervious urachus, urine dribbles through
a) Umbilicus b) Prepuce
c) Vulva d) Anus

298. Perineal hernia is usually met with in
a) Castrated old dogs b) Un castrated young dogs
c) Un castrated old dogs d) Adult female dogs

299. Devita's pinning is one of the treatment recommended for
a) Hip dysplasia
b) Fracture of femur head
c) Hip dislocation
d) Fracture of pelvis

300. Utrecht method of omentopexy is a treatment recommended for
a) Abomasal displacement
b) Gastric dilatation
c) Caecal dialatation
d) Recto vaginal fistula

301. In fracture treatment the fragments heal with least callus in
a) Intramedullary pinning
b) Thomas splint
c) Dynamic compression plating
d) Plaster cast

302. Sweeny is a synonym used to denote
a) Radial paralysis
b) Suprascapular paralysis
c) Ulnar nerve paralysis
d) Sciatic paralysis

303. Dropped sole is a symptom seen in
a) Chronic Navicular disease
b) Acute laminitis
c) Chronic laminitis
d) Quittor

304. Intervertebral disc disease is most frequently encountered in dog breed
a) Dachshund
b) Cocker Spaniel
c) Labrador Retriever
d) Chinese Pug

305. The main disadvantage of intramedullary pinning of tibia is the lack of
a) Rotational stability
b) Shear force
c) Axial compression
d) Bending stability

306. The 'U' shape of foot is changed to 'V' shape in
a) Ring Bone
b) Bobba bone
c) Pyramidal disease
d) Navicular Disease

307. For sub luxation of patella in cattle, desmotomy of the ligament is done on
a) Middle straight ligament
b) Medial straight ligament
c) Lateral straight ligament
d) Cruciate ligament.

308. Shoe boil is a condition of horse, affecting the
a) Point of elbow
b) Posterior hock region
c) Anterior knee region
d) Anterior stifle region

309. Urethral calculi in cats are in the form of
a) Small concretions
b) Sand like particles
c) Large stones
d) Small stones

310. A pear shaped swelling covered with mucous membrane and escaping of urine observed between vulval lips of horses is a condition of
a) Prolapse of bladder
b) Prolapse of vagina
c) Eversion of bladder
d) Hypertrophy of clitoris

311. Castration of male dogs is recommended to prevent recurrence of perineal hernia due to

a) Rectal diverticulum
b) Enlarged prostate
c) Perineal fat
d) Distended bladder

KEY ANSWERS

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
b	d	c	c	c	b	a	d	a	b	b	d	d	d	a
16	17	18	19	20	21	22	23	24	25	26	27	28	29	30
b	c	c	c	d	b	c	c	d	a	c	a	c	b	c
31	32	33	34	35	36	37	38	39	40	41	42	43	44	45
a	c	b	a	b	a	c	b	c	a	a	b	d	b	c
46	47	48	49	50	51	52	53	54	55	56	57	58	59	60
a	d	a	a	a	a	b	a	d	b	b	a	b	c	b
61	62	63	64	65	66	67	68	69	70	71	72	73	74	75
b	c	c	a	a	c	c	c	c	a	b	c	a	a	a
76	77	78	79	80	81	82	83	84	85	86	87	88	89	90
c	a	a	c	a	d	a	d	a	b	d	a	a	b	d
91	92	93	94	95	96	97	98	99	100	101	102	103	104	105
b	a	c	c	a	d	a	a	d	b	b	a	a	b	c
106	107	108	109	110	111	112	113	114	115	116	117	118	119	120
c	c	a	a	d	a	b	c	d	b	c	c	d	a	b
121	122	123	124	125	126	127	128	129	130	131	132	133	134	135
b	a	c	d	a	c	a	b	d	b	a	a	d	b	d
136	137	138	139	140	141	142	143	144	145	146	147	148	149	150
c	b	a	d	b	c	c	b	c	b	a	a	c	b	a
151	152	153	154	155	156	157	158	159	160	161	162	163	164	165
a	c	c	a	c	b	b	b	c	a	a	a	c	b	b
166	167	168	169	170	171	172	173	174	175	176	177	178	179	180
c	d	b	a	a	d	b	a	c	c	d	c	a	d	a
181	182	183	184	185	186	187	188	189	190	191	192	193	194	195
c	d	b	c	b	c	b	c	a	a	c	a	c	a	d
196	197	198	199	200	201	202	203	204	205	206	207	208	209	210
c	d	b	a	b	b	b	c	c	d	d	d	a	a	b
211	212	213	214	215	216	217	218	219	220	221	222	223	224	225
c	b	b	d	b	b	c	c	b	d	a	c	b	a	a
226	227	228	229	230	231	232	233	234	235	236	237	238	239	240
c	a	b	a	a	b	d	d	b	a	c	a	a	b	d
241	242	243	244	245	246	247	248	249	250	251	252	253	254	255
b	b	b	b	a	c	b	c	c	a	a	c	c	b	a
256	257	258	259	260	261	262	263	264	265	266	267	268	269	270
b	d	c	c	c	c	a	c	a	b	c	d	a	a	b
271	272	273	274	275	276	277	278	279	280	281	282	283	284	285
d	b	a	b	c	b	b	a	b	c	c	b	b	c	c
286	287	288	289	290	291	292	293	294	295	296	297	298	299	300
b	c	b	d	a	c	a	b	a	c	d	a	c	c	a
301	302	303	304	305	306	307	308	309	310	311				
c	b	c	a	a	c	b	a	b	c	b				

II. Fill up the blanks:

1. Debridement is necessary in ..... type of wound.
2. ..... are the different inversion suture techniques.
3. To prolong the action of local anesthetic ..... is used.
4. A non-inflammatory swelling containing fluid is called as .....
5. ..... wounds should not be sutured.
6. Abscess is a cavity containing pus and is lined by .....
7. Haematoma of ..... is common in dogs.
8. Methods of dehorning are cantery and .....
9. In-turning of palpebral borders of eye lid is called as ..... and out-turning of the same is known as ..... whereas in-turning of the eye lashes is called as .....
10. Lampas is the synonym for .....
11. Site for drainage of pericardial sac is ..... intercostals spaces
12. In heart disease ..... is a fatal condition.
13. Laceration of lung by fractured rib may cause .....
14. Phalangial exostosis is called as .....
15. Hyperoestroginism is also called as ..... in bitches.
16. Surgery performed to satisfy the fancy of owners is called as .....
17. Collection of blood in an abnormal cavity is referred as .....
18. An ulcer with thickened edges is called .....
19. Haemorrhage from a cut major vessel is controlled by .....
20. Torn and uneven edges are seen in ..... wound.
21. Inflammation of testes is called .....
22. Colle's fracture is a fracture of ..... bone.
23. Massage is done in the direct of .....
24. ..... is a synthetic absorbable type of suture material.
25. In wounds in which the superficial layers of skin only are removed are called .....
26. Strong analgesic used to immobilize wild animals is .....
27. Administration of atropine sulphate is contra indicated in ..... species.
28. Fatty animals require ..... anaesthetic when compared to emaciated animals.
29. Loss of sensibility to pain is called as .....
30. Local anaesthetic toxicity can be treated by using ..... barbiturate.
31. The drug induced sleep accompanied by analgesia is .....
32. Morphine is contraindicate in ..... species.
33. The lower lip in cattle is desensitized by ..... nerve block.
34. Ethyl chloride act as surface anaesthetic by its ..... action.
35. Pigs are good subject for ..... anaesthesia.
36. ..... are common complications occur in fracture treatment.
37. ..... is a commonly occurring connective tissue tumour in animals.
38. Shock result if more than ..... of the skin surface is affected by burns.
39. ..... are important complications associated with general anaesthesia in ruminants.
40. ..... is a local anaesthetic for topical application in the eye.
41. Toxic symptoms of lignocaine hydrochloride are .....
42. The site for epidural analgesia in cattle is .....
43. ..... is a commonly employed anticholinergic drug.

44. When a hernia is strangulated soon after the time of its occurrence, it is called as an .....
45. ..... size B.P. blade is suitable for No.3 B.P. handle.
46. During surgery, the Scalpel is held in three methods namely .....
47. Methods of haemostasis employed during surgery are .....
48. ..... is an example for eversion suture pattern.
49. ..... demonstrated the ether anaesthesia for the first time.
50. ..... is a commonly used antiseptic solution in surgery.
51. Cushing is an example for ..... suture pattern.
52. ..... is an injury caused by hot liquid.
53. Reactionary hemorrhage may be due to .....
54. ..... is a local anaesthetic for topical application in eye.
55. ..... suture is an example for eversion suture pattern.
56. ..... is an abscess involving the sebaceous gland.
57. ..... is an example of dry gangrene in cattle.
58. ..... fistula is a congenital fistula seen in animals.
59. Autoclaving of the instruments is done at a temperature of .....
60. ..... is a commonly used irritant antiseptic solution in surgery.
61. The intramuscular dose of atropine sulphate in dogs and goats are .....
62. Intravenous catheters are placed either in ..... or ..... veins in dogs.
63. ..... are the examples for semiclosed with absorption system of administration of inhalant anaesthetics.
64. ..... nerve block causes prolapse of penis.
65. Chloral hydrate is administered intravenously in large animals as ..... solution at the dose of ..... mg/kg body weight.
66. In cattle ..... hours of withholding food and ..... hours of withholding water is adequate before induction of general anaesthesia.
67. ..... are the examples of ultrashort acting barbiturates.
68. Control of bleeding from large wound cavity is achievd by .....
69. Tourniquet retension is allowed maximum for a duration of .....
70. ..... knot is preferred when using nylon suture material.
71. ..... cyst is an abnormal tooth developing outside the mouth.
72. ..... is the cardinal sign of wound infection.
73. ..... is the treatment of choice for avulsion fractures.
74. ..... needles are used to suture hollow visceral organs.
75. ..... needles are convenient for suturing deep cavities.
76. Connell's suture passes through ..... layers of hollow viscera.
77. ..... is a tranquilizer commonly used along with tiletamine.
78. Effect of xylazine is easily reversed by .....
79. In ..... hernia blood supply to hernial contents is impaired and in ..... hernia the hernial contents become voluminous.
80. ..... is the basic prerequisite while using muscle relaxants.
81. The purpose of bandaging wounds are .....
82. Collection of pus in the body cavity is ..... and collection of pus in an abnormal cavity is .....
83. ..... are the commonly used antiseptic for scrubbing.
84. ..... are the characteristics of malignant tumors.
85. A burn is an injury caused by ..... and a scald is an injury caused by .....
86. An ulcer infected with pathogenic organism and if spreading is called as .....

87. ..... is a synthetic non-absorbable suture.
88. Neuroleptanatgesia is produced by combining .....
89. ..... nerve block is indicated for surgery of the horn.
90. In the year 1901 ..... received Nobel prize in physics for the discovery of X-rays.
91. Adhesion of the palpebral conjunctiva to the bulbar conjunctiva is called as .....
92. ..... is the congenital absence of teeth.
93. ..... is the hardening agent in the Fixer solution.
94. Protrusion of an intact decemet's membrane through a corneal ulcer is termed as .....
95. Negative terminal of the x-ray tube is called .....
96. ..... commonly herniates into thorax through the defect in diaphragm in bovines
97. Tension band wiring is the treatment of choice for ..... fracture.
98. In ..... condition the urine dribbles from the umbilicus and the area remains wet.
99. ..... is a condition of osteitis of the navicular bone.
100. ..... rib is resected for pericardiotomy in cattle.

KEY ANSWERS

1	**Septic**	2	**Cushing, Connell Lumbert and Joberts**
3	**Oily base or adrenalin**	4	**Cyst**
5	**Septic**	6	**Pyogenic membrane**
7	**Ear**	8	**Flap method**
9	**Entropion; ectropion; trichiasis**	10	**Palatitis**
11	**Fifth**	12	**Post caval syndrome**
13	**Pneumothorax and haemothorax**	14	**Ring bone**
15	**Nymphomania**	16	**Cosmetic Surgery**
17	**Haematoma**	18	**Indurated ulcer**
19	**Ligation**	20	**Lacerated**
21	**Orchitis**	22	**Distal end of radius**
23	**Venous flow**	24	**Polyglactin 910**
25	**Abrasions**	26	**Etorphine**
27	**Bovine**	28	**More**
29	**Analgesia**	30	**Thio/short acting**
31	**Narcosis**	32	**Feline**
33	**Mental**	34	**Freezing**
35	**General**	36	**Non Union and Delayed Union**
37	**Fibroma**	38	**4%**
39	**Tympany and regurgitation**	40	**Tetracaine**
41	**Hypotension, hypothermia and cardiac fibrillation**	42	**First intercoccygeal/Sacrococcygeal**
43	**Atropine sulphate**	44	**Acute hernia**
45	**10, 11, 12 and 15**	46	**Pencil grip, Finger grip and Palmed grip**
47	**Crushing and ligation**	48	**Continuous mattress**
49	**W.T.G. Morten**	50	**Potassium permanganate**

51	**Inversion**	52	**Scald**
53	**Infection and septic disintegration**	54	**Amithocaine / 4% Xylocaine topical**
55	**Guy**	56	**Acne**
57	**Bed sore**	58	**Rectovaginal**
59	**121°C**	60	**Tr. Iodine**
61	**0.045 mg/kg and 0.01 to 0.04 mg/kg body weight**	62	**Cephalic or saphena**
63	**Ayre's T-piece and Magill apparatus**	64	**Pudendal**
65	**6-8%; 90-100**	66	**36; 24**
67	**Thiopentone Sodium and Thiamylal Sodium**	68	**tamponade**
69	**1½ hours**	70	**Tripple**
71	**Dentigerous**	72	**Suppuration**
73	**Tension band wiring**	74	**Atraumatic**
75	**Curved**	76	**Serosa, muscularis and mucosal**
77	**Zolazepam**	78	**Yohimbine**
79	**Strangulated; incarcerated**	80	**Analgesies/Anaesthetics**
81	**Protection from contamination/infection and to prevent mutilation**	82	**Empyema; abscess**
83	**Cetrimide and Chloroxylenol**	84	**Fast multiplication and recurrence**
85	**Hot solids; hot liquids.**	86	**Decubitis**
87	**Polyamide/polybutester**	88	**Sedative and opioids**
89	**Cornual**	90	**Wilhelm Conrad Roentgen**
91	**Symblepharon**	92	**Anodontia**
93	**Ammonium chloride**	94	**Desmetocele**
95	**Filament cathode**	96	**Reticulum**
97	**Avulsion**	98	**Pervious urachus**
99	**Navicular disease**	100	**Fifth**

III. State TRUE or FALSE:

1. Spaying is an example for elective surgery.
2. Obese animals require more quantify of anaesthetic.
3. A purulent tract discharging pus is called as fistula.
4. Elevated blood pressure is outstanding feature in shock.
5. Morphine causes maniacal excitement in cats.
6. Muscle is not regenerated but replaced with fibrous tissue.
7. Pain is less in first-degree burns.
8. Umbilical tape is an absorbable suture material.
9. Lignocaine can be used for intravenous regional anaesthesia.
10. Shortening of the limb is seen in dorsal hip dislocation.
11. Yohimbin hcl is the antidote for etorpine.
12. Doxapram is a cardiac stimulant.
13. Photographic effect is used for quantification of X-rays.
14. Echo imaging is the principle behind ultrasonography.
15. Pus in antrum is commonly seen in horses.
16. Oronasal fistula in dogs occur secondary to severe periodontal disease.

17. Bulla osteotomy is recommended as a treatment for otitis externa.
18. Emmetropia is the term used to denote abnormal vision.
19. Needle biopsy is contra-indicated in bleeding disorders of liver.
20. A symmetrical splenomegaly is seen in vascular disorders of spleen.
21. Excision of dorsal fold of skin that overlies vagina is called as episiotomy.
22. Rotation of the third phalanx would cause perforation of the sole.
23. Posterior digital nerve block is used for diagnosis of navicular disease.
24. Butress foot is the exostosis of the extensor process of the third phalanx.
25. The arterial blood pressure is decreased in septic shock.
26. The maggots of secondary myiasis feeds on living tissue.
27. Hyaline cartilage is not regenerated but is replaced by connective tissue.
28. A penetrated wound has even edges.
29. In sub-cuticular suture, the knot is buried and is not visible outside.
30. Non absorbable sutures are preferred in places where much tension is expected.
31. Vetafil is a non-absorbable suture.
32. Fat tissue has maximum suture holding power.
33. Wound healing progresses slowly in animals of advanced age.
34. Adrenaline increases systolic blood pressure.
35. Drug producing selective transit reversible paralysis in nerve is referred as sedative.
36. Halothane is a dissociative anaesthetic.
37. Over dosage of thiopentone sodium leads to cardiac arrest.
38. Auriculo palpebral nerve block is used to perform evisceration of eye ball.
39. To desensitize flank region of cattle the T13, L1 and L2 nerve should be blocked.
40. Chloroform is a volatile inhalant liquid.
41. During ether administration irritation of upper respiratory tract is observed in horses.
42. Xylazine is contraindicated in last trimester of pregnancy in cattle.
43. Small animals require less anaesthetic dose when compared to large animals.
44. The eyeball rotates ventrally in dogs and cats in halothane anaesthesia in plane 2 of surgical anaesthesia.
45. The cylinder pressure gauge directly indicates the quantity of oxygen present in an oxygen cylinder.
46. Acepromazine is an ideal premedicant in stallions.
47. Xylazine sedation is indicated in brachicephalic breeds of dogs.
48. Glyceryl Guaiacolate is an ideal intravenous anaesthetic in goats.
49. Nitrous oxide is a safe gaseous anaesthetic in ruminants.
50. Auriculopalpebral nerve block produces akinesia of eyelids.
51. Xylazine does not provide intraoperative analgesia.
52. Boiling sharp instruments causes loss of their cutting quality.
53. Swaged-on-needles are intended for single use.
54. Catgut is made out of the mucosa of sheep intestine.
55. Granny knot is a slipknot.
56. Parker kerr suture pattern is a primary suture used to close the uterine stump.
57. Cortisones are not advised in septic shock.
58. Cotton is less irritating to tissues than extra chromic catgut.
59. Bone healing can occur in the presence of infection.
60. Conservative surgery is performed to preserve or restore a disabled part.
61. Gambee's suture techniques is commonly used for oesophageal anaestamosis.
62. Coated silk can be used for intestine, bladder and uterus.
63. A gowned and gloved surgical team members perform draping.
64. Surgical risk is a subtle line between good and bad outcome of surgery.

65. Excessive salivation is an unusual feature of xylazine sedation in ruminants.
66. Implants are the devices used for external, coaptation techniques.
67. Depressed fracture occurs in long bones.
68. A/O principles are applied for external coaptation techniques.
69. Reverse cutting needle will have cutting edge on the convex surface.
70. Modified Thomas splints uses the principle of traction for fracture repair.
71. Lembert suture runs at right angle to the line of incision.
72. Clinical dose of xylazine in bovines produces death in equines.
73. Comminuted fracture commonly occurs in cartilage.
74. Fracture of distal extremity of tibia is called colle's fracture.
75. The mucous membrane will be cyanotic during death in septic shock.
76. Hypotension and tachycardia are the typical signs of shock.
77. Disinfectants are used on inanimate objects.
78. Bone healing can occur in the presence of infection.
79. Cotton thread will produce lesser tissue reaction than catgut.
80. Obstructive urolithiasis is primarily a problem in bullocks.
81. Atresia ani is an acquired anomaly.
82. Fascia has the minimum suture holding power among soft tissues.
83. The chromicised catgut is more irritating to tissues than plain catgut.
84. The thickness of catgut decreases as the size number increases from 1 to 7.
85. Addition of epinephrine to local anesthetics cause prolonged action.
86. Tension sutures are otherwise called as Relaxation sutures.
87. Cotton suture is less irritating to tissues thah chromic catgut.
88. In indolent ulcer there is abundance of soft granulation tissue.
89. Swaged-on needle are indented for single use.
90. Boiling sharp instruments causes loss of their cutting quality.
91. Clinical dose of xylazine in equines produces death in bovines.
92. Joseph Lister introduced theory and practice of asepsis.
93. Removal of root cause of the disease by surgery is known as elective surgery.
94. Inflammation of the interdental space in horses due to injury caused by bits is called gnathitis.
95. High kVp produces x -rays of shorter wavelength which have greater penetration power.
96. Over exposure causes white radiograph.
97. Air is an example for negative contrast medium
98. Silver recovery is a process of removing silver from the x- ray fixer solution.
99. Guttural pouch tympany occurs usually unilaterally and is more common in adult horses.
100. Abomasal displacement is diagnosed with the liptak test.
101. Chronic luxation of patella is corrected by desmotomy of the medial patellar ligament.
102. Partial obstruction of teat is known as imperforate teat..
103. Ossified lateral cartilage of the foot are called side bones.

KEY ANSWERS

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
T	T	F	F	T	T	F	F	T	T	F	F	F	T	F
16	17	18	19	20	21	22	23	24	25	26	27	28	29	30
T	F	F	T	F	F	T	T	T	T	F	T	F	T	T

31	32	33	34	35	36	37	38	39	40	41	42	43	44	45
T	F	T	T	F	F	F	T	T	T	T	T	F	T	F
46	47	48	49	50	51	52	53	54	55	56	57	58	59	60
T	F	F	F	F	T	T	T	F	T	T	F	T	F	T
61	62	63	64	65	66	67	68	69	70	71	72	73	74	75
F	T	F	T	T	F	F	T	F	T	T	F	F	F	F
76	77	78	79	80	81	82	83	84	85	86	87	88	89	90
F	T	F	T	F	F	F	F	F	T	T	T	T	T	T
91	92	93	94	95	96	97	98	99	100	101	102	103		
T	T	F	T	T	F	T	T	F	T	T	F	T		

IV. Match the following:

I)

a. Hydroxiquinone
b. Alum
c. Silver bromide
d. Calcium tungstate
e. Zinc cadmium sulphide
f. Cellulose acetate

1. Fluorescent screen
2. Film base
3. Developer
4. Fixer
5. Film coating
6. Intensifying screen

Ans: a. 3 b. 4 c. 5 d. 6 e. 1 f. 2

II)

a. Persistent erection of penis
b. Absence of testes in the scrotum
c. False pregnancy
d. Distance between two successive foot prints
e. Purulent inflammation of cartilage of 3rd phalanx
f. Inability of penis to retract into sheath

1. Paraphimosis
2. Pseudocyasis
3. Stride
4. Quittor
5. Priapism
6. Cryptorchidism

Ans: a. 5 b. 6 c. 2 d. 3 e. 4 f. 1

III)

a) Phenothiazine derivative
b) Local anaesthetic
c) No tendency to heal
d) Break in soft tissue
e) I/v anaesthetic
f) Articular surface
g) Break in hard tissue
h) Inhalation anaesthetic
i) α_2 adreno receptor
j) Local tissue death

1. Wound
2. Ether
3. Necrosis
4. Barbiturate
5. Ulcer
6. Lignocaine
7. Xylazine
8. Fracture
9. Triflupromazine
10. Dislocation

Ans: a) 9 b) 6 c) 5 d) 1 e) 4
f) 10 g) 8 h) 2 i) 7 j) 3

IV)

1. 1% Cetrimide	a) Closed wound
2. Vetafil	b) Burns
3. Gambee	c) Hypodermic needle
4. Sprain	d) Synthetic nonabsorbable
5. Phlegmon	e) Inguinal hernia
6. Glioma	f) Cellulitis
7. Hyperkalaemia	g) Ligament
8. Bubonocele	h) Nerve
9. Bruise	i) Shock
10. Plasma	j) Intestine

Ans: **1. c** **2. d** **3. j** **4. g** **5. f**
6. h **7. i** **8. e** **9. a** **10. b**

V)

1. Triflupromazine hydrochloride	a) Teat
2. Tiletamine	b) Bradycardia
3. Buprenorphine	c) Styptic
4. Bupivacaine	d) Ultra short acting barbiturate
5. Ring block	e) Synthetic colloid
6. Atropine sulphate	f) Tranquilizer
7. Haematosalpinx	g) Opioid analgesic
8. Gel-foam	h) Potent local anaesthetic
9. Dextran 70	i) Fellopian tube
10. Pentothal Sodium	j) Zolazepam

Ans: **1. f** **2. j** **3. g** **4. h** **5. a**
6. b **7. I** **8. c** **9. e** **10. d**

VI)

1. Coaxial system	a) Soda lime canister
2. Semiclosed method	b) Yohimbine
3. Xylazine	c) Dynamic compression plating
4. High airway pressure	d) Skin grafting
5. Closed circuit	e) Non rebreathing circuit
6. External co-optation	f) Uterus suturing
7. AO technique	g) Cleft palate
8. Reconstructive surgery	h) K-E apparatus
9. Plastic surgery	i) Barotrauma
10. Utrect method	j) Magill circuit

Ans: **1. j** **2. e** **3. b** **4. I** **5. a**
6. h **7. c** **8. g** **9. d** **10. f**

VII)

1. Burn	a) Ranula
2. Second intention healing	b) Hydrocele
3. Parker-kerr suture	c) Very little scar tissue
4. Retention cyst	d) Microorganism present
5. Pointing	e) Microorganism multiply
6. First intention healing	f) Stump closure
7. Infected wound	g) Intestinal anaestamosis
8. Exudation cyst	h) Replacement of tissue
9. Gambee's suture	i) Abscess
10. Contaminated wound	j) Dry heat

Ans: 1. j 2. h 3. g 4. a 5. i
6. c 7. e 8. b 9. g 10. d

VIII)

1. Collimator	a) pig mouth
2. Prognathism	b) scattered radiation
3. Grid	c) image sharpness
4. Intensifying screen	d) gum
5. Braghynatism	e) X-ray beam restrictor
6. Epulis	f) parrot mouth

Ans: 1. e 2. a 3. b 4. c 5. f 6. d

IX)

1. Carpus valgus	a. Uterus
2. Carpus varus	b. Bladder
3. Invaginated portion of intestine	c. Knock knee
4. Outer ensheathing portion of intestine	d. Bow leg
5. Vesicocele	e. Intussusceptum
6. Hysterocele	f. Intussuscipiens

Ans: 1. c 2.d 3. e 4. f 5. b 6. a

CHAPTER 15
ANIMAL REPRODUCTION, OBSTETRICS & GYNAECOLOGY

I. Choose the correct answer:

1. Post-coital pyometra is commonly observed in
   a) Brucellosis
   b) Vibriosis
   c) Trichomoniasis
   d) IBR-IPV virus infection

2. The anterior part of vagina develops into a pouch or pocket around the cervix known as
   a) Bursa
   b) Vestibule
   c) Fornix
   d) Diverticulum

3. The most accurate technique of pregnancy diagnosis in bitch at 20 days of gestation
   a) Cessation of oestrum
   b) Abdominal palpation
   c) Progesterone assay
   d) Ultrasonography

4. Placenta is considered to be retained in bovine if it is not expelled within
   a) 6-8hrs
   b) 8-10hrs
   c) 12-24hrs
   d) 24-36hrs

5. Ovulation occurs after the end of oestrum in
   a) Bitches
   b) Cows
   c) Goats
   d) Pigs

6. The most common cause of dystocia in sow is
   a) Primary uterine inertia
   b) Secondary uterine inertia
   c) Idiopathic uterine inertia
   d) Obstructive dystocia

7. The enzyme that converts placentally derived progesterone to oestrogen before partutuition
   a) 17 alpha hydroxylase
   b) 17 beta hydroxylase
   c) Aromatase
   d) Phospholipase A2

8. A foetal monster characterized by lateral curvature of spine
   a) *Campylorachis scoliosa*
   b) *Perosomus elumbis*
   c) *Perosomus horridus*
   d) *Schistosomus reflexes*

9. Milk progesterone assay to diagnose pregnancy in Cow is done on
   a) 15 days post service
   b) 21-24 days post service
   c) 35 days post service
   d) 5-10 days post service

10. The physiological half life of progesterone in the cow is
   a) 22-36 min
   b) 22-36 sec
   c) 22-36 h
   d) 44-72 min

11. Endothelio-chorial type of placentation is seen in
   a) Rat
   b) Human
   c) Dog
   d) Mare

12. Torsion of uterus is most commonly observed in
a) Mare
b) Cow
c) Buffalo
d) Ewe

13. Midcycle heat in cows is diagnosed by rectal examination by the presence of
a) Well developed follicle
b) Functional corpus luteum
c) Regressing copus luteum
d) Corpus albicans

14. The embryonic origin of Leydig cells
a) Coelomic cells
b) Primary sex cords
c) Mesenchymal cells
d) Pronephros

15. The immunoglobulin present in semen is
a) Ig G
b) Ig A
c) Ig M
d) None of the above

16. Prostaglandin in male is secreted by
a) Prostate
b) Seminal Vesicle
c) Cowper's gland
d) Ampulla

17. The specific staining used for detecting acrosomal sperm defect is
a) Eosin nigrosin staining
b) Giemsa staining
c) Leishman staining
d) Papanicolou staining

18. Feminising tumour of testis
a) Granulosa cell tumor
b) Sertoli cell tumour
c) Arrhenoblastoma
d) Leydig cell tumour

19. Non-sexual erection of penis is known as
a) Pederasty
b) Priapism
c) Carnal intercourse
d) Satyiasis

20. A species in which semen is alkaline
a) Ram
b) Buck
c) Boar
d) Bull

21. Enzyme that aids in penetration of spermatozoa by sperm head
a) Hyaluronidase
b) Acrosin
c) Lipase
d) Catalase

22. AI glass catheters are sterilized by dry heat for half hour at
a) 100°C
b) 160°C
c) 200°C
d) 260 °C

23. The spermicidal factor in fresh milk
a) Phospholipid
b) Lactenin
c) Lactalbumin
d) Caesin

24. One dose of liquid semen for ideal conception by AI in cow should atleast contain motile sperms at a rate of
a) 1-15 million
b) 10-15 million
c) 20-25 million
d) 25-30 million

25. The most commonly recognized disease of the internal genitalia of the bulls is
a) Prostatitis
b) Vesiculitis
c) Ampullitis
d) Epididymitis

26. The repeat breeder cow has an oestrous cycle length of
a) Long duration
b) Short duration
c) Normal length
d) Split heat

27. An inter oestrus length of 30-35 days is an indication of
a) Delayed ovulation
b) Third degree endometritis
c) Early embryonic death
d) Failure of fertilization

28. Aplasia of one horn of uterus is termed as
a) Uterine hypoplasia
b) Uterus unicornis
c) Uterus didelphis
d) Uterine agenesis

29. The spilling of the contents of cortical granules into peri vitelline space is responsible for
a) Acronmal reaction
b) Polyspermy
c) Zona reaction
d) Parthenogenesis

30. Capacitation is accomplished by binding of sperms with
a) Glyceryl phosphoryl choline
b) Glycosaminoglycans
c) Phospho lipids
d) Lecithin

31. The inflammation of the outer most layer of uterus is called as
a) Endometritis
b) Perimetritis
c) Parametritis
d) Metritis

32. Sexually deformed female partner of a hetero sexual twin in cattle is called as
a) Mosaic
b) Hermaphrodite
c) Bull dog
d) Freemartin

33. Harrops model of artificial vagina is associated with semen collection from
a) Stallion
b) Boar
c) Cock
d) Dog

34. Glyceryl phosphoryl choline is secreted by
a) Testis
b) Epididymis
c) Seminal Vesicle
d) Prostate

35. Mediastinum testes is absent in
a) Stallion
b) Bull
c) Ram
d) Buck

36. Robertsonian translocation in bovines involves the chromosomes
a) 1 and 29 b) 2 and 21
c) 7 and 32 d) 5 and 15

37. The uterine infection accompanied by accumulation of pus in uterus and anoestrum
a) 1st degree endometritis b) 2nd degree endometritis
c) 3rd degree endometritis d) Hydrometra

38. Inability of penis to withdraw back into the prepuce is termed as
a) Phimosis b) Paraphimosis
c) Stenosis d) Strangulation

39. Casting of calf bed is
a) Uterine torsion b) Post partum uterine eversion
c) Prepartum cervico vaginal prolapse d) Uterine rupture

40. Metoestral bleeding seen in cattle is due to
a) Oestrogen stimulation b) Oestrogen withdrawal
c) Progesterone withdrawal d) Progesterone stimulation

41. The scientist who first performed AI successfully in domestic animal
a) La Spallanzani b) Amantea
c) Evanov d) Zemjanis

42. The process of pushing in, the foetus from birth canal to uterus is termed as
a) Retropulsion b) Version
c) Rotation d) Extension

43. A test to assess patency of salpinx in bovines
a) Cuboni test b) P.S.P test
c) White side test d) Ascheim Zontak test

44. A condition wherein semen sample contains reduced number of sperms
a) Azoospermia b) Asthenozoospermia
c) Oligozoospermia d) Necrospermia

45. Most effective drug to treat bovine foetal mummification
a) Dexamethasone b) Progesterone
c) Prostaglandin d) Oxytocin

46. A diluent in which Nitrogen is bubbled to maintain pH
a) CME b) Caprogen
c) IVT d) CAW

47. Drug of choice in primary uterine inertia
a) Oestrogen b) Progesterone
c) Oxytocin d) hCG

48. Intra uterine death of foetus followed by absorption of fetal fluids may lead to
a) Foetal maceration
b) Foetal mummification
c) Hydramnion
d) Hydro allantois

49. The cavernous structure that closes the neck of the urinary bladder during sexual excitement which prevents urination during ejaculation
a) Corpus cavernosum penis
b) Corpus spongiosum penis
c) Colliculus seminalis
d) Corpus fibrinosum penis

50. The species in which deep freezing of semen was first carried out successfully
a) Ovine
b) Bovine
c) Caprine
d) Avian

51. The first water bag expelled during parturition
a) Allanto chorion
b) Allantois
c) Amnion
d) Chorion

52. The causative agent for epizootic bovine abortion
a) Chlamydia
b) Brucella
c) Mycoplasma
d) IBR-IPV

53. Rosette Inhibition test for pregnancy diagnosis is for the detection of
a) hCG
b) EPF
c) b-PAG
d) alpha interferon

54. Total head abnormalities of bull semen sample should not exceed
a) 10%
b) 5%
c) 15%
d) 20%

55. The technique used for collection of oocytes from live animals is
a) TVOR
b) MOET
c) IVP
d) Slicing

56. This is an anti-prolactin agent
a) Progynon
b) Proluton
c) Bromocryptin
d) Lutalyse

57. Postural abnormalities of head and neck of fetus are most commonly observed in the dystocia of
a) Cow
b) Mare
c) Sheep
d) Goat

58. A patent product containing natural $PGF_2\alpha$
a) Estrumate
b) Clofert
c) Lutalyse
d) Iliren

59. Progestogens can be used for control of oestrous cycles of --------- cows
a) Cyclic
b) Noncyclic
c) Cyclic and noncyclic
d) None of these

60. Name of developmental stage of the embryo in which individual blastomeres are difficult to differentiate one another and cellular mass occupy most of the perivitelline space.
a) Compact morula
b) Morula
c) Blastocyst
d) Expanded blastocyst

61. The half life of PMSG is more than that of FSH due to the presence of
a) Ascorbic acid
b) Sialic acid
c) Acetic acid
d) None of these

62. Which is the precursor for spermatozoon acrosome
a) Chromatoid body
b) Golgi apparatus
c) Mitochondria
d) Ribosome

63. In addition to spermatozoa which of the following may be seen in stained semen smears
a) Spermatids
b) Medusa cells
c) Squamous epithelial cells
d) All of the above

64. The site of deposition of semen during natural service in swine is
a) Intracervical
b) Intrauterine
c) Anterior vagina
d) All of the above

65. The intra-tubular non germ cells are
a) Spermatogonia
b) Sertoli cells
c) Leydig cells
d) Spermatids

66. In cows and buffaloes the luteolytic dose of $PGF_2\alpha$ or its analogue is only one fifth or less than intramuscular route when administered via
a) Intravenous
b) Subcutaneous
c) Intrauterine
d) Intravaginal submucus

67. Estrogen is secreted by which of the following
a) Zona pellucida
b) Membrana granulosa
c) Theca interna
d) Theca externa

68. Gyceryl phosphoryl choline is secreted by
a) Epididymis
b) Prostate
c) Ampulla
d) Seminal Vesicles

69. Swiss cheese appearance of endometrium is seen in
a) Luteal cyst
b) Follicular cyst
c) Both a & b
d) Par-ovarian cyst

70. Cloudburst is associated with pseudopregnancy in
a) Goat
b) Horse
c) Pig
d) Dog

71. Biological half life of LH is
a) 30 min
b) 70 min
c) 15 min
d) 45 min

72. Species in which the luteolysin is transported locally, but not exclusively to the adjacent ovary
a) Equine
b) Caprine
c) Swine
d) Bovine

73. Species in which preovulatory luteinisation of follicle occurs
a) Bovine
b) Caprine
c) Feline
d) Canine

74. Surgical correction employed for chronic prolapse of vagina and wind sucking
a) Episiotomy
b) Caslicks Operation
c) Zepps
d) Canthotomy

75. "Casting of calf bed" is a colloquial term given for
a) Prolapse of bladder
b) Prolapse of uterus
c) Retention of foetal membranes
d) Discharge of lochia

76. Precursor of Prostaglandin
a) Cholesterol
b) Arachidonic acid
c) Benzoic acid
d) Caproic acid

77. Hormone secreted from Pars Intermedia
a) TSH
b) MSH
c) CRH
d) ACTH

78. Morula has ---------- number of cells
a) 16-32
b) 4-8
c) 32-64
d) 64-128

79. The pigment 'uteroverdin' is associated with placenta of
a) Swine
b) Equine
c) Canine
d) Bovine

80. Number of follicular waves commonly seen in oestrous cycle of cows
a) 1 to 2
b) 2 to 3
c) 3 to 5
d) 4 to 5

81. ---------- is the patent product containing natural PGF 2 alpha
a) Estrumate
b) Clofert
c) Iliren
d) Lutalyse

82. ---------- is a mono-oestrous animal.
a) Cat
b) Horse
c) Bitch
d) Camel

83. Phantom pregnancy in bitches is due to the action of this hormone
a) Estrogen
b) Progesterone
c) Prolactin
d) Oxytocin

84. Non- hormonal method of syncronization in ewes
a) Flushing
b) Weaning
c) Artificial light
d) Pheromones

85. Predominant cell type present in exfoliative vaginal cytology of bitches during metestrum
a) Keratinized cells
b) RBC
c) Neutrophils
d) Foam cells

86. Survivability of dog spermatozoa in the reproductive tract of bitches
a) 24 hrs.
b) 8 hrs.
c) 2 to 3 days
d) 4 to 7 days

87. Site of A.I. with frozen semen in pigs
a) Intracervical
b) Intrauterine
c) Anterior vagina
d) All of the above

88. Accessory gland present in cats, but not in dogs
a) Bulbourethral
b) Prostate
c) Seminal Vesicles
d) None of the above

89. Spermiogenesis is regulated by which of the hormones
a) FSH
b) LH
c) Testosterone
d) Estrogen

90. Collaginase, used for treatment of retention of foetal membranes is administered through
a) Intramuscular route
b) Intravenous route
c) Intra uterine
d) Retained umbilical cord

91. Which of the following is a congenital sperm defect affecting the acrosome
a) Dag defect
b) Decapitate defect
c) Pseudo droplet
d) Knobbed sperm defect

92. Temperature of Liquid nitrogen is
a) - 180°C
b) - 196°C
c) - 79°C
d) - 179°C

93. First successful embryo transfer in cattle was carried out by
a) Heape *et al.*
b) Wilmut and Rowson
c) Warwick and Berry
d) Willet *et al.*

94. In cattle, embryo moves from the oviduct to uterus
a) 2-3 days after ovulation
b) 3-4 days after ovulation
c) 5-6 days after ovulation
d) 7-8 days after ovulation

95. The earliest day by which pregnancy can be diagnosed in cattle by B-mode real time ultrasonography
a) 3days
b) 6 days
c) 9 days
d) 19 days

96. Stain used for flow cytometric sorting of spermatozoa
a) Eosin-Nigrosine
b) Giemsa stain
c) FITC
d) Hoechs 33342

97. Ovulation in cattle occurs during
a) Proestrum
b) Oestrum
c) Metoestrum
d) Diestrum

98. Hermaphrodism is more common in
a) Caprines
b) Dogs
c) Horse
d) Cattle

99. An anomaly in cattle in which the foetus lacks coccygeal vertebrae and has deformed sacral vertebrae with a sunken perineal region
a) Spina bifida
b) Hemivertebrae
c) Schistosomus reflexus
d) Perosomus acaudatus

100. Foetal mummification is more common in
a) Horse
b) Sheep
c) Dog
d) Swine

101. True extrauterine pregnancy is seen in
a) Humans
b) Dogs
c) Swine
d) Cattle

102. Maternal recognition of pregnancy starts in cattle by
a) 16-17 day
b) 12-13 day
c) 20-22 day
d) 6-7 day

103. Cervical star is associated with pregnancy in
a) Cow
b) Sow
c) Heifer
d) Mare

104. The ideal duration of dry period in a pregnant cow
a) 30 days
b) 45 days
c) 60 days
d) 90 days

105. Hooke head spermatozoa are characteristic of
a) Cock
b) Rat
c) Guinea pig
d) Duck

106. Incidence of cryptorchidism is more in
a) Horse
b) Cattle
c) Goat
d) Dog

107. The substrate for endogenous respiration of spermatozoa
a) Glucose
b) Fructose
c) Plasmalogen
d) Sucrose

108. Glycerylphosphorylcholine is produced predominantly by
a) Epididymis
b) Ampulla
c) Testes
d) Seminal vesicle

109. The secretion of the gland which aids in flushing of urethra in bull
a) Ampulla
b) Seminal vesicle
c) Prostate
d) Bulbourethral gland

110. White side test for the diagnosis of endometritis is done using
a) 10 % egg white
b) 5% NaOH
c) 10 % NaCl
d) 5 % $NaHCO_3$

111. Fertile life of bovine ovum is
a) 30-48 hrs
b) About 12 hrs
c) 6-8 hrs
d) 60 hrs

112. Du Vigneaud got the Nobel Prize in 1955 for his research on
a) Oxytocin
b) Progesterone
c) Oestrogen
d) Prostaglandin

113. The precursor for the hormone melatonin is the amino acid
a) Tryptophan
b) Tyrosine
c) Arginine
d) Lysine

114. The release of formed germ cells into the lumen of seminiferous tubule is known as
a) Spermatocytogenesis
b) Spermatogenesis
c) Spermiogenesis
d) Spermiation

115. The transport time for bull spermatozoa through the epididymis is
a) 3 days
b) 11 days
c) 17 days
d) 21 days

116. Presence of cytoplasmic droplet in a significant number of spermatozoa is a sign of immaturity except in
a) Boar
b) Dog
c) Bull
d) Buck

117. Testicular descent in bovines occur by
a) Last quarter of foetal life
b) Half way through foetal life
c) Just before birth
d) Just after birth

118. Which of the following statement is false with respect to cryptorchidism
a) The thermal needs of testis are not maintained
b) Normal spermatogenic function is not possible
c) Endocrine functions of testis is impaired
d) More or less normal sexual desire is exhibited

119. The major portion of extra gonadal sperm reserves of ruminants is found in
a) Caput epididymis
b) Corpus epididymis
c) Cauda epididymis
d) Ampulla

120. The only accessory gland present in a male dog is
a) Seminal vesicle
b) Prostate
c) Bulbourethral gland
d) Ampullae

121. The animal having highest spermatozoa concentration per ml from among
a) Boar
b) Bull
c) Dog
d) Buck

122. The osmolarity of seminal plasma is about
a) 100 mOsm
b) 200 mOsm
c) 300 mOsm
d) 400 mOsm

123. Flutamide is
a) Antiandrogen
b) Antioestrogen
c) Antiprolactin
d) Antiprogesterone

124. An inhibitor of 5 □ reductase (enzyme which converts testosterone to 5-□ dihydroxy testosterone
a) Finasteride
b) Luprostiol
c) Melengesterol acetate
d) Cabergoline

125. Drug of choice for bovine pyometra
a) Progesterone
b) Ethinyl estradiol
c) Prostaglandin
d) Cabergoline

126. An instrument used for retropulsion of foetus for correction of dystocia
a) Moore's obstetrical chain
b) Shrievers snare introducer
c) Krey schottler double jointed hook
d) Kuhn's crutch repeller

127. Alteration of transverse or vertical presentation of foetus to a longitudinal presentation is known as
a) Traction
b) Rotation
c) Retropulsion
d) Version

128. Foot nape posture is most common in
a) Equine
b) Bovine
c) Caprine
d) Porcine

129. The antibiotic penicillin is added in diluted semen at the rate of
a) 500-1000 IU/ml
b) 500-1000 mg/ml
c) 500-1000 IU/100 ml
d) 500-1000 mg/100 ml

130. A cryoprotectant used in frozen semen production
a) TRIS
b) Fructose
c) Citric acid
d) Glycerol

131. The sperm concentration in a normal bull ejaculate is
a) 200-400 million/ml
b) 800-1200 million/ml
c) 2000-2500 million/ml
d) 2500 – 3000 million/ml

132. Receptal is a trade preparation of
a) Vincristine
b) Buserelin
c) Cabergoline
d) Bromocriptine

133. Oblique ventro vertical presentation of foetus is other wise called as
a) Breech presentation
b) Nape posture
c) Dog sitting position
d) Foot nape posture

134. The pelvic inlet is more round in
a) Cow
b) Ewe
c) Mare
d) Sow

135. Induced ovulators
a) Bovine
b) Ovine
c) Feline
d) Canine

136. The number of carbon atoms in estradiol are
a) 18
b) 19
c) 21
d) 27

137. The main hormone responsible for relaxation of pelvic ligaments is
a) Relaxin
b) Prostaglandin
c) Progesterone
d) Estrogen

138. Fertile life of ovum in cow is
a) 1-3 hrs.
b) 3-5 hrs.
c) 6-12 hrs.
d) 12-24 hrs.

139. Immobilization reflex and Lordosis are characteristic signs of estrus in
a) Mare
b) Cat
c) Rabbit
d) Sow

140. Epithelio chorial type of placentration is observed in
a) Bitchs
b) Rats
c) Mares
d) Primates

141. Maternal recognition of pregnancy occurs in cows between
a) 7-9 days
b) 9-10 days
c) 12-16 days
d) 19-21 days

142. Block to polyspermy is achieved by
a) Acrosomal reaction
b) Cortical reaction
c) Enzymes produced by spermatozoa
d) All the above

143. Mediastinum testis is absent in which of the following
a) Stallion
b) Bull
c) Ram
d) Buck

144. The gel portion of the boar semen is produced by
a) Prostate
b) Bulbo-urethral glands
c) Seminal vesicles
d) Ampulla

145. The functions of the sertoli cells are
a) Production of Androgen Binding Protein and FSH
b) Production of Estrogen and Androgen
c) Production of Estrogen and Androgen Binding Protein
d) Conversion of Testosterone to Dihydro-testosterone

146. Inhibin has got negative feed back over hypothalamus and pituitary to control the release of
a) FSH and LH
b) LH alone
c) FSH alone
d) FSH and Prolactin

147. Glyceryl phosphoryl choline is secreted by
a) Testis
b) Epididymis
c) Seminal vesicles
d) Prostate

148. The species in which pressure of the artificial vagina is more important than temperature
a) Goat
b) Boar
c) Bull
d) Dog

149. Inability of the penis to withdraw back into the prepuce is termed as
a) Phimosis
b) Paraphimosis
c) Stenosis
d) Strangulation

150. Fibrosis and calcification of testis is observed in which of the following
a) Testicular hypoplasia
b) Testicular degeneration
c) Testicular tumours
d) Orchitis

151. The most common cause of orchitis in bull is
a) Leptospirosis
b) Brucellosis
c) Trichomoniasis
d) Orchitis

152. Complete lack of libido is observed in
a) Testicular hypoplasia
b) Testicular degeneration
c) Bilateral cryptorchidism
d) Bilateral testicular aplasia

153. Placenta is considered to be retained in cattle if it is not expelled within
a) 12 h
b) 24 h
c) 48 h
d) 72 h

154. Uterine infection accompanied by accumulation of pus in uterus and anoestrum is
a) 1st degree endometritis
b) 2nd degree endometritis
c) 3rd degree endometritis
d) None of these

155. Post partum haemorrhage can be effectively controlled by parentral administration of
a) Pituitrin
b) Ergometrin
c) Prostaglandin
d) Oxytocin

156. The ovaries affected with total hypoplasia will appear
a) Pea shaped
b) Bean shaped
c) Flat, shrunken and shriveled with longitudinal furrows
d) Heart shaped

157. The ideal treatment for follicular cyst and nymphomania is
a) Manual rupture
b) LH or LHRH
c) LH or LHRH followed by prostaglandin on the 10th day
d) FSH & Prolactin

158. The normal duration of second stage of parturition in Mare is
a) 20 minutes
b) 2 hours
c) 4 hours
d) 8 hours

159. Pregnancy can be correctly diagnosed in goats at 2 months by
a) Abdominal palpation
b) Radiology
c) Bimanual palpation method
d) ELISA

160. Ovulation occurs after the end of oestrum in
a) Bitches
b) Cows
c) Pigs
d) Horse

161. The attainment of puberty in cattle is more correlated with
a) Age
b) Body weight
c) Enzymatic changes in the blood
d) None of the above

162. Clitoris will develop from
a) Mullerian duct
b) Urogenital sinus
c) Genital tubercle
d) Urethral folds

163. Normally the duration of estrum in bitch is
a) 12-24 hrs.
b) 2-4 days
c) 4-7 days
d) 9 days

164. Biological half life of GnRH is
a) 3 mts
b) 7 mts
c) 11 mts
d) 15 mts

165. Inflammation of outer layer of uterus is called as
a) Endometritis
b) Perimetritis
c) Parametritis
d) Metritis

166. The peptide secreted by the ovary is
a) Estrogen
b) Progesterone
c) Oxytocin
d) F.S.H.

167. Post-coital pyometra is commonly observed in
a) Brucellosis
b) Vibriosis
c) Trichomoniasis
d) IBR-IPV

168. Superovulation is induced in the cow by administering
a) GnRH
b) FSH
c) LH
d) Prostaglandin

169. The diffuse type of placenta is seen in
a) Cow
b) Bitch
c) Sow
d) Ewe

170. The peritoneal fold keeping fallopian tube in position is called as
a) Broad ligament
b) Mesosalphinx
c) Mesoovarium
d) None

171. Oblique ventrovertical presentation of the fetus in cow is otherwise called as
a) Vertex posture
b) Nape posture
c) Breech presentation
d) Dog sitting posture

172. The descent of testis into the scrotum in cattle occurs at
a) Immediately after birth
b) Immediately before birth
c) About 4 months of gestation
d) About 4 months after birth

173. Urethral process is present in the penis of
a) Dog and Buck
b) Buck and Stallion
c) Stallion and Bull
d) Bull and Buck

174. The source of the androgen in Stallion is
a) Leydig cells
b) Seminiferous tubules
c) Epididymis
d) All the above

175. In spermatogenic process, it has been identified that there are several distinct cellular association or stages. The number of stages in bulls is
a) 10
b) 11
c) 12
d) 13

176. The mitochondria are located in spermatozoa at
a) Apical segment of the head
b) Mid-piece
c) Tail
d) Equatorial segment of the head

177. Total abnormality of spermatozoa in a semen sample should not exceed
a) 10%
b) 20%
c) 30%
d) 40%

178. Persistent penile frenulum will result in
a) Ventral deviation of penis
b) Lateral deviation of penis
c) Spiral deviation of penis
d) All the above

179. Spermiogenesis is regulated by which of the hormones
a) FSH
b) LH
c) Testosterone
d) Estrogen

180. Maturation and fertilizing ability of spermatozoa are occurring at
a) Rete testis
b) Epididymis
c) Seminiferous tubules
d) Ampulla

181. Time of Artificial Insemination in cow is
a) Before the onset of estrum
b) Mid to late estrum
c) Early to mid estrum
d) After the end of estrum

182. Seminal vesicles are vesicular in which species
a) Ovine
b) Canine
c) Bovine
d) Equine

183. The fertility of a bilaterally cryptorchid animal is
a) Reduced
b) Optimum
c) Maintained
d) Zero

184. The Sertoli cells produce, which maintains sufficient levels of androgen in SFT
a) Androgen itself
b) Inhibin
c) ABP
d) Sperm specific protein

185. The form of infertility caused by affections of locomotor system is
a) Lack of sex drive
b) Impotentia cocundi
c) Impotentia generandi
d) Transient

186. The intra-tubular non-germ cells are
a) Spermatogonia
b) Sertoli cells
c) Leydig cells
d) Spermatids

187. The arrangement that prevents the entry of certain substances and allows the free passage of others is known as
a) Tunica albuginea
b) Myoid layer
c) Blood-testis barrier
d) Vascular cone

188. The medium that preserves the frozen semen is
a) LN_2 vapour at -196°C
b) LN_2 at -79°C
c) LN_2 at -196°C
d) LN_2 vapour at 5°C

189. The percent of eosin present in vital stain is
a) 1.67
b) 1.0
c) 0.67
d) 16.7

190. In normal bulls the total sperm head abnormalities should not be more than
a) 20% b) 15%
c) 10% d) 5%

191. It is the precursor for spermatozoon acrosome
a) Chromatil body b) Golgi apparatus
c) Ribosome d) Mitochondria

192. It is a reversible testicular condition
a) Hypoplasia b) Degeneration
c) Fibrosis d) Cryptorchidism

193. The species that produce semen with large volume and low sperm concentration
a) Bovine b) Caprine
c) Equine d) Canine

194. It is a most commonly used cryoprotective agent
a) Fructose b) DMSO
c) Glycerol d) Lecithin

195. The first sign of testicular degeneration is the presence of
a) Loose head(s) b) Tail defects
c) Dead cells d) Immotile cells

196. The initial evaluation of the semen is carried out at
a) 40°C b) 25°C
c) 30-35°C d) 42°C

197. The method commonly used for studying the sperm tail abnormalities is
a) H & E b) Eosin & Negrosine
c) Formal saline (wet film) d) Williams

198. The optimum number of motile sperm to be fixed in an inseminating dose of cow
a) 80×10^6 b) 40×10^6
c) 20×10^6 d) 10×10^6

199. The animal that has calved twice or more is called as
a) Uniparous b) Multiparous
c) Pluriparous d) Primiparous

200. A sexually deformed female partner of a heterosexual twin is called as
a) Mosaic b) Hermophrodite
c) Bull dog d) Freemartin

201. The longest phase of estrous cycle in domesticated animals is
a) Proestrus b) Estrus
c) Metestrus d) Diestrus

202. The most accurate technique of pregnancy diagnosis in bitch is
a) Cessation of estrus
b) Abdominal palpation
c) Progesterone assay
d) Ultrasonography

203. Sexual differentiation in bovines occur by
a) 60 days
b) 45 days
c) 30 days
d) 15 days

204. Seasonally polyestrus long day breeder is
a) Mare
b) Sheep
c) Cow
d) Buffalo

205. In which species of animal the season of birth and photoperiod affects the onset of puberty
a) Sheep
b) Pig
c) Cattle
d) Buffalo

206. Pregnancy diagnosis is much more accurate per rectum during, which trimester of the gestation in cattle
a) First trimester
b) Second trimester
c) Third trimester
d) Any trimester

207. Which one of the following statements is wrong
a) Progessterone is a pregnancy hormone
b) Progesterone has positive feed back on hypothalamous pituitary axis
c) Progesterone causes myometrial block
d) Progesterone causes mammary development

208. The anterior part of the vagina develops into a pouch or pocket around the cervix known as
a) Phalanx
b) Vestibule
c) Fornix
d) External os

209. The circulating concentration of that hormone increases upon clitorial stimulation (Massage)
a) Histamine
b) Oxytocin
c) Prostaglandin F_2 alpha
d) Estradiol

210. A pathognomic symptom of nymphomania
a) Arching of the spine
b) Pseudo hump
c) Bowed legs
d) Sterility hump

211. Which of the following is an example for maternal dystocia
a) Primary uterine inertia
b) Hydrocephalus
c) Fetal oversize
d) Postural abnormality

212. Per vaginal delivery of oversized fetus is effected by
a) Slow and gradual but simultaneous traction on both limbs
b) Disengage limb and traction on the other
c) Place the dam on its dorsum
d) Alternative traction on limbs

213. The drug of choice for treating a she buffalo with primary uterine inertia
a) Gynotocin (Oxytocin)
b) Lutalyse (PG F_2 alpha)
c) Progynon Depot (Estradiol valerate)
d) Prolution Depot (Progesterone)

214. The usage of this term is more appropriate in Veterinary Science, but not human medicine
a) Obstetrics
b) Theriogenology
c) Gynaecology
d) Andrology

215. Who authored the text book titled 'Veterinary Obstetrics'?
a) Jackson
b) Roberts
c) Benesch and Wright
d) Arthur and others

216. A non-invasive technique to prevent recurring genital prolapse is
a) Hind limbs on elevated platform
b) Rope truss
c) Medicinal therapy
d) Buhner's technique

217. Which one of the statements in respect of the application of progesterone in clinical practice is true
a) It prevents prolapse
b) Its application has no rationality
c) It stops threatened abortions with no complications
d) It controls genital prolapse

218. Shortening the estrous cycle is one of the approaches to treat endometritis. How does it help?
a) Enhances uterine defense
b) Cleanses the uterus
c) Flushes the uterus
d) Absorbs contents

219. The key factor that determines the shedding of after births (fetal membranes) is
a) First stage labor
b) Placental maturity
c) Abdominal contractions
d) Second stage labor

220. The best way of packaging the sperm for freezing is in
a) Glass ampules
b) Pellets
c) Straws
d) Plastic capsules

221. A Keralite that authored a book on "Principles and Practice of Deep Freezing Bull Semen"
a) Dr. Abraham
b) Dr. Mathew
c) Dr. Abraham Mathew
d) Prof. Prabhakaran Nair

222. Choose a nuclear sperm defect
a) Knobbed sperm
c) Diadem sperm
b) Cork Screw Sperm
d) Dag's defect

223. A non-genetic infertile condition is
a) Cryptorchidism
c) Spastic syndrome
b) Seminal vesiculitis
d) Testicular Hypoplasia

KEY ANSWERS

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
c	c	d	c	b	b	a	a	b	a	c	c	b	c	b
16	17	18	19	20	21	22	23	24	25	26	27	28	29	30
b	b	b	b	c	b	b	b	b	b	c	c	b	c	b
31	32	33	34	35	36	37	38	39	40	41	42	43	44	45
b	d	d	b	a	a	c	b	b	b	c	a	b	c	c
46	47	48	49	50	51	52	53	54	55	56	57	58	59	60
b	c	b	c	d	a	a	b	b	a	c	b	c	c	a
61	62	63	64	65	66	67	68	69	70	71	72	73	74	75
b	b	d	b	b	d	b	a	b	a	a	c	d	b	b
76	77	78	79	80	81	82	83	84	85	86	87	88	89	90
b	b	a	c	b	d	c	c	c	c	d	b	a	a	d
91	92	93	94	95	96	97	98	99	100	101	102	103	104	105
d	b	d	b	d	d	c	a	d	d	a	a	d	c	b
106	107	108	109	110	111	112	113	114	115	116	117	118	119	120
a	c	a	d	b	b	a	a	d	b	a	b	c	c	b
121	122	123	124	125	126	127	128	129	130	131	132	133	134	135
d	c	a	a	c	d	d	a	a	d	b	b	c	c	c
136	137	138	139	140	141	142	143	144	145	146	147	148	149	150
a	a	d	d	c	c	b	a	b	c	c	b	d	b	b
151	152	153	154	155	156	157	158	159	160	161	162	163	164	165
b	d	a	c	a	c	c	a	b	b	b	c	d	b	b
166	167	168	169	170	171	172	173	174	175	176	177	178	179	180
c	c	b	c	b	d	c	b	d	c	b	b	a	c	b
181	182	183	184	185	186	187	188	189	190	191	192	193	194	195
b	d	d	c	b	b	c	c	b	d	b	b	c	c	a
196	197	198	199	200	201	202	203	204	205	206	207	208	209	210
c	b	d	c	d	d	d	c	a	a	a	b	c	b	d
211	212	213	214	215	216	217	218	219	220	221	222	223		
a	d	a	b	c	a	c	a	b	c	c	c	b		

II. Fill up the blanks:

1. Ovary of sow is ..... in shape and that of mare oval.
2. Numbers of caruncles in cow are ..... and in sheep .....
3. ..... cavity stores the waste products of foetal kidneys.

4. Block to polyspermy is achieved by .....
5. ..... is the remnant of mesonephric duct system in female.
6. Failure of cervical dilation in sheep and goat is known as .....
7. Bilateral hip flexion is also termed as .....
8. The affected animal behaves like a buller in .....
9. Two major biochemical components of secretion of vesicular gland of boar are .....
10. Minimum time requird for capacitation of sperms in female genital tract is .....
11. Two major hereditary spermatozoan defects are .....
12. ..... are the methods of semen collection from crippled bulls.
13. Semen is deposited in uterus in ..... during coitus.
14. When there is reduced number of spermatozoa in semen sample the condition is called .....
15. The key hormone necessary for the maintenance of pregnancy is .....
16. The colour of lochial discharge is ..... in bitches.
17. Activation of ovum by some means other than sperm is known as .....
18. The corpus luteum is otherwise known as .....
19. Fetus decides the ..... of birth and dam decides the ..... of birth.
20. The velocity of sperm cells in bovine cervical mucus at estrum is .....
21. Lochia is otherwise called as .....
22. ..... is a flagellate which spreads venereally in cattle.
23. The hormone ECG is secreted from .....
24. The key hormone necessary for the maintenance of pregnancy is .....
25. Activation of ovum by some means other than sperm is known as .....
26. Scrotal circumference is the best indicator of .....
27. The weight of the bull testis is.....
28. The total number of excretory ducts present in the prostate gland of dog is .....
29. The length of penis in canine is approximately ..... cm.
30. Seminal vesicles of the bull contribute ..... to the semen.
31. Duration of spermatogenesis in bull is ..... days.
32. The physical capability to perform the act of copulation in male is called as .....
33. Mediastinum testis is absent in .....
34. Male genital system originates from .....
35. Placental hormones are .....
36. The ovary of mare will have ..... shape.
37. The normal gestation period of horse is ..... days and that of buffalo is .....days.
38. Ageing of gamete lead to ..... during fertilization.
39. Uterus masculinus represents remnant of .....
40. The rotation of the fetus on its transverse axis into an anterior or posterior presentation is called as .....
41. The tubular genital tract of the male is formed by ..... duct system.
42. The only accessory male sex gland in dog is .....
43. The source of Androgen Binding Protein is .....
44. The duration of the cycle of seminiferous epithelium in bull is ..... days.
45. ..... are in high concentration in the secretions of seminal vesicle in boar.
46. The partial or complete lack of libido is called as .....
47. The semen sample containing more number of abnormal spermatozoa is called as .....
48. Glycerol is a freezing point depressing compound which prevents .....damage to sperm cells.

49. Spermatogenesis is under the regulation of FSH from Anterior Pituitary and spermiogenesis is under the control of .....
50. The testicular descent occurs at ..... months of gestation in horse and ..... in dogs.
51. The distance between two similar cellular association in the seminiferous tubule is called as .....
52. At the time of semen collection, the temperature inside the aritificial vagina should be between .....
53. The internal temperature of artificial vaginal should be maintained at ..... during semen collection.
54. Frozen semen is stored in liquid nitrogen at .....
55. ..... is the inability to withdraw the penis into the prepuce.
56. Follicle maturation and steroidogenesis are under the influence of .....
57. In rabbits ovulation is induced by the act of .....
58. Trans uterine migration of embryo in sows is for the purpose of ..... the number of embryos between the horns.
59. The most common fungus responsible for mycotic abortion in cattle is .....
60. Maceration of foetus in polytocous species is accompanied by ..... of macerated foetus without interrupting pregnancy.
61. The hereditary form of ovarian hypoplasia is due to .....
62. Luteal insufficiency in early gestation and resultant repeat breeding can be successfully treated with a single holding injection of .....
63. Habitual abortion in cows can be successfully prevented by the administration of ..... every 7-10 days until 8th month of gestation.
64. The most common type of deviation of the fetal head that causes dystocia in bovine is .....
65. The obstetrical operation usually adopted to relieve dystocia due to anasarca of foetus is .....
66. Average volume of buck semen is .....
67. The range of temperature of Artificial vagina of bull is .....
68. Deficiency of ..... leads to testicular degeneration.
69. The number of progressively motile spermatozoa in a dose of bull semen for optimum fertility is .....
70. The ideal time for insemination of cows for maximum conception is .....
71. The final concentration of glycerol in the extender used for freezing of bull semen is .....
72. In Nigrosin Eosin staining method ..... acts as the vital stain.
73. The major extragonadal sperm reserve is in the .....
74. Fructose in the seminal plasma is secreted by the .....
75. The immunological barrier in the seminiferous tubule which prevents isoimmune antibody production is known as .....
76. In dogs ..... causes testicular feminization syndrome.
77. Delayed ovulation may be tackled by administration of ..... hormone.
78. Ovulation takes place during ..... in cows and ..... in mares.
79. Viral causes of abortion in swine include .....
80. The caruncles are ..... in cows and ..... in sheep.
81. The process of cellular division without growth is called as .....
82. If there is a history of abdominal pain and anorexia in full term cow, it should be examined for .....
83. Hormones involved in luteal regression are .....

84. Extrauterine pregnancy is also called as ..... pregnancy.
85. The normal gestation period of pig is ..... days.
86. Expulsion of dead fetus at the time of parturition is called as .....
87. The zona pellucida fragments and the blastocyst hatches on ..... days after fertilization in cows.
88. The female genital tract develops from the primitive ..... duct system.
89. The lack of normal physiologic uterine contractions during and after parturition is called as .....
90. Scrotal ligament is a remanant of .....
91. The two lateral lobes of prostate are interconnected by ..... in stallion.
92. ..... is responsible for conversion of testosterone into biologically active dihydrotestosterone.
93. The yellow colour of semen in bulls is due to ..... secreted by vesicular gland.
94. Dribbing seen from the prepuse prior to mounting are secretions from ..... glands.
95. Feminization and gynaecomastia in males are the clinical signs observed in ..... tumour.
96. ..... is the most commonly used cryoprotectant in the routine frozen semen technology.
97. The main carbohydrate provided by seminal plasma is Fructose and the process of break down is called .....
98. eCG is secreted by ..... in mare.
99. The pituitary hormone responsible for ovulation is .....
100. ..... is the drug of choice in the treatment of foetal mummification.
101. ..... is characterized by gradual filling of the amniotic cavity that is associated with defective fetus.
102. Secondary uterine inertia usually follows ..... and is characterized by exhaustion of the uterine muscles.
103. At 9-10 days of post partum the lochia is dark brown in colour and is due to .....
104. ..... are venereal diseases that can be transmitted at coitus.
105. The causes of repeat breeding have been broadly classified into .....
106. Persistent corpus luteum is accompanied by lesions in the .....
107. ..... condition is white heifers disease.
108. Nymphomania symptom is associated with follicular cyst and is due to excess of ..... a steroid hormones.
109. The seminiferous epithelium consists of .....
110. ..... structure in the scrotal skin are responsible for thermoregulation of testes.
111. During ejaculation ..... deposits the semen in the vaginal fornix.
112. ..... is the characteristic feature of glans penis of boar.
113. The glans penis of goat is characterized by ..... process.
114. ..... is termed as inflammation of the glans penis and ..... termed inflammation of prepuce.
115. Reduced sperm cell concentration is called as .....
116. Inhibin is secreted by ..... of the testis.
117. Boar semen is rich in .....
118. Prostatic hyperplasia is common in ..... species.
119. ..... steroid hormone can be used to improve libido in bulls.

KEY ANSWERS

1	**Mulberry**	2	**75-120; 80-90**
3	**Allantoic**	4	**Cortical reaction**
5	**Gartner's duct**	6	**Ring womb**
7	**Breech presentation**	8	**Nymphomania/Follicular cyst**
9	**Inositol and Ergothionine**	10	**4-6 hours**
11	**Dag defect and Knobbeal sperm**	12	**Massage and electro ejaculation**
13	**Mare and sow**	14	**Oligospermia**
15	**Progesterone**	16	**Greenish black**
17	**Parthenogenesis**	18	**Yellow body**
19	**Day; time**	20	**56 microns / sec**
21	**Second clensing**	22	***Trichomonas foetus***
23	**Endometrial cups**	24	**Progesterone**
25	**Parthenogenesis**	26	**Sperm production capacity**
27	**200-500 gm**	28	**Two**
29	**5 – 10**	30	**Volume, buffer and nutrient**
31	**45**	32	**Potency**
33	**Stallion**	34	**Wolffian duct**
35	**eCG, hCG, Placental lactogen and Protein B**	36	**Bean**
37	**330; 310**	38	**Polyspermy**
39	**Mullerian duct**	40	**Version**
41	**Wolffian**	42	**Prostate gland**
43	**Sertoli cells**	44	**13.5**
45	**Ergothionine and Inositol**	46	**Impotentia coeundi**
47	**Teratozoospermia**	48	**Intracellular ice crystal formation and mechanical/osmotic**
49	**LH and Testosterone**	50	**9; 4-5 days after birth**
51	**Spermatogenic wave**	52	**40-45°C**
53	**42-45°C**	54	**-196°C**
55	**Paraphimosis**	56	**FSH and LH**
57	**Coitus**	58	**Spacing**
59	**Aspergillus**	60	**Retaining**
61	**Autosomal recessive gene**	62	**Progesterone**
63	**Progesterone**	64	**Lateral deviation**
65	**Fetotomy**	66	**0.2-1.2 ml**
67	**40-45°C**	68	**Vitamin A**
69	**10 million**	70	**Standing heat/6-24 hours from the onset of heat**
71	**7%**	72	**Eosin**
73	**Cauda epididymis**	74	**Seminal vesicle**
75	**Blood testis barrier**	76	**Sertoli cell tumour**
77	**GnRH**	78	**12 hours after end of estrus; 1-2 day before the end of heat**
79	**SMEDI, Hog cholera and Pseudorabies**	80	**Convex; concave**
81	**Cleavage**	82	**Torsion of uterus**

83	**Prostaglandin, Oxytocin and Estrogen**	84	**Ectopic**
85	**114**	86	**Still birth**
87	**9-11**	88	**Mullerian or Paramesonephric**
89	**Uterine inertia**	90	**Gubernaculum**
91	**Isthmus**	92	**5α reductase enzyme**
93	**Riboflavin**	94	**Cowpers and urethral**
95	**Sertoli cell**	96	**Glycerol**
97	**Fructolysis**	98	**Endometual cups**
99	**LH**	100	**PGF_2**
101	**Hydramnion**	102	**Dystocia**
103	**Digested blood**	104	**Trichomoniasis and Campylobacteriosis**
105	**Fertilization failure and Early embryonic death**	106	**Uterus**
107	**Persistent hymen**	108	**Estrogen**
109	**Germinal cells and Sertoli cells**	110	**Dartos and Cremaster externus**
111	**Cattle and goat**	112	**Cork screw shape**
113	**Urethral**	114	**Balanitis; Posthitis**
115	**Athenozoospermia**	116	**Sertoli cells**
117	**Inositol & Ergothionine**	118	**Canine**
119	**Testosterone**		

III. Write TRUE or FALSE:

1. There is no restriction in using animals with scrotal hernia for breeding programme.
2. Cryptorchids are usually sterile.
3. Treatment with gonadotropic hormones is not indicated in case of testicular hypoplasia)
4. Yellowish green colour of semen indicates E.coli infection.
5. Normal pH of semen of animals with high volume is alkaline except in dogs.
6. An urethral sinus is present in the penis of buck.
7. Body of prostate of buck is not visible as in bull.
8. Prostate is the only accessory sex gland in tom cat.
9. Interstitial cells produce androgen and are located inside the seminiferous tubule.
10. Onset of puberty in male is closely related to the age rather than the body weight.
11. Nutritional deficiency causing bovine infertility is a multiple one.
12. The half life of the LH is 45 minutes.
13. Tucked up udder is the pathognomonic sign of fetal mummifiatation.
14. Fructose comprises about 70-80 per cent of the total sugar in fetal blood)
15. Transverse presentation is more common in Mare.
16. Forced extraction is indicated in abnormal pI, p2 and p3.
17. Forward extension of both the forelimbs in anterior presentation is called as breech presentation.
18. Anovulation is confirmed by the absence of corpus luteum in the ovaries at 10th day of estrum.
19. Granulosa cells secrete estrogen and thecal cells secrete testosterone.
20. Swiss cheese endometrium is a characteristic feature of true anestrum.
21. Flehmen's reflex is exhibited by boar during courtship.

22. Retractor penis muscle in bull is a paired muscle arises from the first and second coccygeal vertebrae.
23. Attainment of puberty signifies full reproductive capacity in males.
24. Sexual behaviour in female farm animal is relatively simple when compared to male.
25. In the bull androstenedione is more potent than testosterone.
26. Seminal vesicle is absent in dogs.
27. The urethral process is present in stallion and buck.
28. Inhibin exerts negative feed back effect on FSH release in males.
29. The nomenclature for more number of abnormal sperms in the ejaculated semen sample is terratozoospermia.
30. Among farm animals boar has the longest ejaculation time.
31. Waxing of teats is a characteristic sign of estrus in mare.
32. Ovulation in the cow occurs after the end of estrus.
33. Ventral bulging of the uterine horns is a diagnostic feature in the early pregnancy during rectal palpation in mares.
34. The spread of Brucellosis in cows is mainly because of breeding the cows with infected bulls through natural service.
35. Serological tests such as FAT, Serum Agglutination tests are the confirmative tests to detect vibriosis and Trichomoniasis in dairy herd.
36. Pyometra resulting from Trichomoniasis will haave pus of potato soup colour and consistency.
37. PMSG is the preferred hormone for superovulation in mares.
38. A female calf resulting from monozygotic twin can go for a sterile condition called Freemartinism.
39. In general, hormonal infertility is primary in nature.
40. Fusion of inner and outer acrosomal membrane of spermatozoa occurs during acrosomal reaction.
41. Spermatogenic cells are derived from the progenitors of primary sex cords of the embryonic gonad.
42. Straw yellow colour of the semen is due to a pigment called flavin, which is secreted by the Epididymis.
43. Interstitial cells are the source of Androgen in males, which are present inside the seminiferous tubules.
44. The most important blood testis barrier in farm animal is the presence of sertoli cells junction.
45. The primary abnormality of spermatozoa can be permitted upto 20%.
46. Azoospermia indicate reduced concentration of sperm cells.
47. Onset of puberty in female is closely related to the age rather than its body weight.
48. Primary abnormalities in the spermatozoa are indication of testicular damage.
49. Equilibration is the process in which the cryoprotectant is allowed to exert its eryoprotective properly.
50. Tail of the epididymis acts as a storage site for spermatozoa.
51. The seminiferous tubules are lined by germinal epithelium.
52. Frequent continuous service will increase the amount of semen and concentration of spermatozoa.
53. Fructose serves as a major source of energy for the spermatozoa in the semen of dog.
54. Distal protoplasmic droplet of the sperm is a primary abnormality.
55. Testicular degeneration causes increased primary sperm abnormality.
56. Hormonal therapy is indicated in testicular hypoplasia in cattle.
57. Artificial insemination greatly increases the utilization of proven sires.

58. In swine, the semen is deposited in the uterus during natural service.
59. The mass activity of a good quality buck semen can be seen with the naked eye if viewed against reflected light.
60. The Hydrogen ion concentration of semen from boar and stallion is alkaline.
61. If a single minor sperm defect alone exceeds 20 percent the semen is considered unfit for use in A.I.
62. Even if the post thaw motility of frozen semen is 20 percent, the sample can be used for A.I.
63. Temperature of A.V. is more important than pressure in getting good collection from boar.
64. Compylobacter organisms in the semen will be destroyed by Penicillin and Streptomycin in the diluent if preserved for 4-6 h before use.
65. In total bilateral hypoplazia of testes, there will be azoospermia.
66. Regulation of hypophyseal function of male is exclusively under the negative feed back of hormones.
67. An adult breeding bull can be used for taking semen collection 200 days in an year.
68. Males with Inguinal hernia can be used for breeding.
69. The amniotic cavity stores the waste products of the foetal kidneys.
70. Female pseudohermaphrodites resemble females but have testes.
71. The duration of oestrus in mares is 24-48 hours.
72. In cow the vestibule is located between the vulva and vagina.
73. The amniotic plaques are present in pigs.
74. Females which are sterile are called as nullipara.
75. Superfecundation is produced when a pregnant female comes in estrus and second conception occurs.
76. During the last month of pregnancy progesterone can be administered to prevent cervicovaginal prolapse.
77. Delayed ovulation causes prolonged estrum.
78. The uterus is supplied by the sensory nerve fibre of the pudental and genital nerves.
79. The inter estrus cycle length of 30-35 days is an indication of anovulation.
80. The cells which secrete PMSG are fetal in origin.
81. Palpation of placentome and double membrane slip are some of the positive signs of pregnancy in mares.
82. Presence of oestrone sulphate in the circulation of a cow is not only confirmative of pregnancy but also life of fetus.
83. In ultrasonography, 7.5 Mhz probes are preferred for early pregnancy diagnosis in cows.
84. Thick, edematous, leathery and necrotic placenta is observed in both Brucella and Mycotic abortions.
85. Unfertilized ovum is not transported from the fallopian tube to the uterus in mares.
86. Corticosteroids can be administered to expel the mummified fetus from the uterus in a cow.
87. Ampulla is absent in dogs.
88. The retractor penis muscle is absent in stallion.
89. FSH regulates spermatocytogenesis upto formation of secondary spermatocyte.
90. Sexual activity of the male increases when many females in the herd become receptive is called as Coolidge effect.
91. Motility of spermatozoa is an exact indication of fertilizing ability.
92. Inability to protrude the penis from prepuce is called as Phimosis.
93. Cell formed after mitotic division in spermatogenesis is called as Spermatid.

94. Flehman reaction is observed as one of the prominent courtship behaviours in boar.
95. Scrotal circumference measurement can be used to assess the sperm producing capacity.
96. Testicular hypoplasia can be treated with administration of gonadotrophic hormones.
97. Female genital system develops from the Wolffian duct system.
98. In breeding results in delayed puberty.
99. Mares are short day breeders.
100. Milk progesterone assay in cows is used to accurately detect non-pregnancy than pregnancy.
101. False extra uterine pregnancy are common in farm animals.
102. Synchronization of estrus is done using ear implants.
103. Estrus activity during pregnancy can occur occasionally in cattle.
104. Uterine torsion is more common in mares.
105. Episiotomy is done to correct uterine prolapse.
106. Failure to cycle normally is termed as repeat breeding.
107. The major portion of sperms are stored in ampulla.
108. Ampulla is well developed in boars.
109. Sigmoid flexure is absent in bulls.
110. Seminal vesicles are absent in dog.
111. Seminiferous tubules are entirely composed of germ cells.
112. Rigs are commonly observed in bulls.
113. The normal pH of semen is 5.
114. Persistent of proximal protoplasmic dropt is a major sperm abnormality.
115. The axoneme of the sperm is formed from proximal centriole.
116. Absence of germinal epithelium in the seminiferous tubule indicates testicular degeneration.

KEY ANSWERS

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
F	F	T	F	T	F	T	F	F	F	T	F	F	T	T
16	17	18	19	20	21	22	23	24	25	26	27	28	29	30
F	F	T	T	F	F	T	F	T	F	T	T	T	T	T
31	32	33	34	35	36	37	38	39	40	41	42	43	44	45
F	T	T	F	F	T	F	F	F	T	T	F	F	T	F
46	47	48	49	50	51	52	53	54	55	56	57	58	59	60
F	F	T	T	T	T	F	F	F	T	F	T	T	T	T
61	62	63	64	65	66	67	68	69	70	71	72	73	74	75
T	F	F	T	T	T	T	F	F	F	F	T	F	F	F
76	77	78	79	80	81	82	83	84	85	86	87	88	89	90
F	T	T	F	T	F	T	T	T	T	F	T	F	T	T
91	92	93	94	95	96	97	98	99	100	101	102	103	104	105
F	T	F	F	T	F	F	T	F	T	F	T	T	F	F
106	107	108	109	110	111	112	113	114	115	116				
F	F	F	F	T	F	F	F	T	F	F				

IV. Match the following:

I

1. Metoestrual bleeding	a) Middle uterine artery
2. Pseudocyesis	b) Mare
3. Waxing of teats	c) Oestrum
4. Obermeyer's hook	d) Polyspermy
5. Fremitus	e. Heifer
6. Forced extraction	f. Follicular cyst
7. Anoestrum	g. Snare
8. Vitelline block	h. Smooth ovaries
9. Sterility hump	i. Dead foetus
10. Frequent urination	j. Dog

Ans: 1. e 2. j 3. b 4. i 5. a
6. g 7. h 8. d 9. f 10. c

II

1. Torsion	a) Righting reflex
2. Pregnancy	b) PSP dye test
3. Tubal obstruction	c) Bitches
4. LH	d) Cubonic test
5. Diffuse type	e. 30 seconds
6. Oxytocin	f. Buffalo
7. Silent estrus	g. Cystic ovary
8. Prolonged estrus	h. 30 minutes
9. Second stage labour	i. Sow
10. Zonary type	j. Schaffer's method

Ans: 1. j 2. d 3. b 4. h 5. i
6. e 7. f 8. g 9. a 10. c

III

Coolidge effect	a) Sexual pause
Refractoriness	b) Novel stimulus
Fructolysis index	c) Inability to fertilize
Impotentia generandi	d) Bull
Short copulator	e. Stallion
Bean	f. Boar
Penile erection	g. Ram
Corkscrew penis	h. Precopulatory behaviour
Pizzle rot	i. Cat
Penile papillae	j. Sperm metabolism

Ans: 1. b 2. a 3. j 4. c 5. d
6. e 7. h 8. f 9. g 10. i

IV

1. Seminal vesicle	a) Semen extender
2. Testosterone	b) Blood testis barrier
3. Ischiocavernosus muscle	c) Ram
4. Seminiferous tubules	d) Primary sperm abnormality
5. Spermatozoa	e) Thermoregulation
6. Scrotum	f) Capacitation
7. Double heads	g) Testis
8. Pizzle rot	h) Erection of penis
9. Myoid cells	i) Interstitial cells
10. Egg yolk buffer	j) Fructose

Ans: 1. j 2. i 3. h 4. g 5. f
6. e 7. d 8. c 9. b 10. a

V

1. Cervical mucus	a) Caruncles
2. Vitelline block	b) Prolonged estrum
3. Prostaglandin	c) Uterine milk
4. Seasonally polyestrus	d) Graffian follicle
5. Estrogen	e) Sheep
6. Progestrogen	f) Luteolysis
7. Delayed ovulation	g) Polyspermy.
8. Endometrium	h) Fern pattern
9. Dourine	i) Follicular cyst
10. Sterility hump	j) Horse

Ans: 1. h 2. g 3. f 4. e 5. d
6. c 7. b 8. a 9. j 10. i

VI

1. Blom (1954)	a) Authority on A.I.
2. Blom (1972)	b) Authority on male infertility
3. Polge	c) Major and minor abnormal sperm classification
4. Ivanoff	d) Primary and secondary abnormal sperm classification
5. Lagerlof	e) Effect of glycerol on freezing

Ans: 1. d 2. c 3. e 4. a 5. b

CHAPTER 16
CLINICAL VETERINARY MEDICINE, ETHICS & JURISPRUDENCE

I. Choose the most appropriate answer from the following:

1. Upper motor neuron disease cause
   a) Flaccid paralysis
   b) Spastic paralysis
   c) Hemiparesis
   d) Paresis

2. In hyperthermia, increased thirst is due to
   a) High environmental temperature
   b) Profused sweating
   c) Loss of sod. Chloride from the body
   d) Dryness of mouth

3. Photosensitization is a feature of poisoning with
   a) Datura
   b) Lantana
   c) Abrus
   d) Bracken fern

4. In toxemia, there is
   a) Fall in blood sugar level
   b) Increase in blood sugar level
   c) Blood sugar not altered
   d) Hyperthermia

5. The specific drug used for gastric ulcer is
   a) Belladonna
   b) Sucralfate
   c) Kaolin
   d) Ranitidine

6. Caudal cyanosis is a typical sign of
   a) Aortic stenosis
   b) Pulmonary stenosis
   c) Septal defect
   d) Reversed PDA

7. Haemoglobinuria associated with hepatitis is common in
   a) Cattle
   b) Sheep
   c) Horses
   d) Pigs

8. Ischemic myopathy is a feature of
   a) Sodium deficiency
   b) Weak calf syndrome
   c) Downer cow syndrome
   d) Milk fever

9. The B complex vitamin having potential glucogenic and antilipolytic activity
   a) Riboflavin
   b) Thiamine
   c) Niacin
   d) Pyridoxine

10. Ideal antidote for arrhythmia associated with calcium injection
   a) Adrenaline
   b) Atropine
   c) Pilocarpine
   d) Neostigmine

11. The short chain fatty acid synthesized in the rumen with highest glucogenic activity
   a) Acetic acid
   b) Propionic acid
   c) Butyric acid
   d) Lactic acid

12. A drug that can breakdown starch in the rumen
    a) Soda. Bicarb. b) Mag. Hydroxide
    c) Chloral hydras d) Monensin

13. Biological precursor for Co-enzyme A used for the treatment of bovine ketosis
    a) Vebonal b) Cysteamine
    c) Monensin d) Trembolone

14. Anisocorea means variation in size of
    a) Pupil b) Eye
    c) Lens d) Cornea

15. Eclampsia in bitches is best treated with
    a) 50% Dextrose b) 10% Cal. Gluconate
    c) Thiamine d) Mifex

16. Downer cow syndrome can be a complication of
    a) Dystocia b) Mastitis
    c) Metritis d) Tympany

17. Milk fever in cow is characterized by
    a) Miosis b) Mydriasis
    c) Cataract d) Photophobia

18. High plasma cortisol level is a feacture of
    a) Bovine ketosis b) Ovine ketosis
    c) Milk fever d) Eclampsia

19. DCM in dog is most commonly associated with deficiency
    a) Carnitine b) Taurine
    c) Co-enzyme d) Vit A

20. Lactation tetany in mare is caused by
    a) Hypoglycemia b) Hypocalcemia
    c) Hypophosphataemia d) Hypomagnesaemia

21. Uraemia in dog is often accompanied by
    a) Vomiting b) Fever
    c) Abdominal pain d) Ascites

22. The specific diagnostic enzyme for downer cow
    a) SGPT b) CPK
    c) SDH d) ALP

23. The most useful anionic compound for prevention of milk fever in cattle
    a) Sodium chloride b) Pot. Chloride
    c) Ammonium chloride d) Calcium chloride

24. Type of fever in canine distemper
a) Biphasic fever b) Atypical fever
c) Intermittent fever d) Recurrent fever

25. Ovine ketosis is more common during
a) Early lactation b) Late pregnancy
c) Early pregnancy d) Late lactation

26. Myxedema with sad expression and rat tail appearance is a feature of
a) Hyperparathyroidism b) Hypoadrenocorticism
c) Hypothyroidism d) Hypopituitarism

27. Mastitis Metritis Agalactia syndrome is more common in
a) Cows b) Buffaloes
c) Goats d) Pigs

28. Baby pig disease is characterized by
a) Hypocalcaemia b) Hypoglycemia
c) Hypothyroidism d) Hypopituitarism

29. Severe proteinuria occurs in
a) Glomerular disease b) Renal amyloidosis
c) UTI d) Urolithiasis

30. P wave in ECG indicate
a) Atrial depolarization b) Ventricular depolarization
c) Ventricular repolarisation d) None of the above

31. Exertional Rhabdomyolisis is common in
a) Pig b) Horse
c) Cattle d) Goat

32. Normal urine protein creatinine ratio
a) <1 b) <1 to 5
c) <0.1 d) >10

33. A positive hepatojugular reflux is a diagnostic feature of
a) Right CHF b) Left CHF
c) Pericardial disease d) Myocarditis

34. The signs of anaemia develop only when haemoglobin level falls below
a) 50% b) 80%
c) 30% d) 75%

35. Most potent antigenic blood group in dog is
a) DEA1.1 b) DEA 1.2
c) DEA 4 d) DEA 7

36. Osteodystrophia fibrosa or bran disease occurs in horses fed on high level of
a) Phosphorus b) Calcium
c) Vit. D d) Magnesium

37. Valvular disease is mainly characterized by presence of
a) Friction sound
b) Murmurs
c) Gallop sound
d) Box sound

38. Digitalis is contraindicated in
a) Dilated cardiomyopathy
b) Ventricular tachycardia
c) Restrictive cardiomyopathy
d) CHF

39. Adulteration of any article of food or drink is punishable under section
a) 269
b) 270
c) 272
d) 284

40. The documents compelling attendance of a witness in a court of law under penalty
a) Report
b) Bail
c) Subpoena
d) Oath

41. Making the animals useless by means of violence
a) Bishoping
b) Maiming
c) Cruelty
d) Bestiality

42. The last stage in the resolution of the body after death
a) Mummification
b) Masseration
c) Adipocere
d) Putrefaction

43. Freshness of milk is usually determined by finding out
a) Acidity of milk
b) Nitrate content of milk
c) Lactometer reading
d) Chloride content of milk

44. Leucomalachite green test is used to detect
a) Blood stain
b) Semen
c) Urine
d) None of the above

45. At what rate should fluids be infused i/v in a dog in shock
a) 90 ml/kg/hr
b) 50 ml/kg/hr
c) 40 ml/kg/hr
d) 20 ml/kg/hr

46. A chronic distension of the joint capsule of the hock
a) Bog spavin
b) Bone spavin
c) Curb
d) Canker

47. Caloric test is used to assess the
a) Optic nerve
b) Vagus nerve
c) Trigeminal nerve
d) Vestibular nerve

48. Drug of choice for status epilepsy
a) Diazepam i/v
b) Diazepam orally
c) Phenobarbitone orally
d) Primidone

49. Cardiac specific enzyme
a) CPK
b) GPT
c) GOT
d) GGT

50. Fluid of choice for cerebral edema
a) Dextrose 5%
b) Mannitol
c) RL
d) DNS

51. An example for endocrinopathy of dog with multiple neurologic manifestation
a) Hypoadrenocorticism
b) Hypothyroidism
c) Hyperthyroidism
d) Hyperoestrogenism

52. Horizontal nystagmus is the characteristic sign of
a) Peripheral vestibular disease
b) Central vestibular disease
c) CCN
d) None of the above

53. Normal CSF pressure of dog is
a) 50-140 mm of H2O
b) 50-140 mm of Hg
c) 50 mm of Hg
d) 180 mm of Hg

54. Breed prone to inherited cerebellar hypoplasia
a) Irish setter
b) GSD
c) Dalmatian
d) Pug

55. Most common cause of lameness in adult dairy cow is
a) Selenium toxicosis
b) Warts
c) Laminitis
d) Sub solar disease

56. Oculo cardiac reflex is used to assess
a) Vagus nerve
b) Optic nerve
c) Trigemenal nerve
d) Vestibular nerve

57. Softening of mature bone
a) Rickets
b) Osteomalacia
c) Osteoperosis
d) Osteodystrophic fibrosa

58. Simple method for assessing bone marrow activity in aneamic patient
a) RBC count
b) WBC Count
c) DLC
d) Reticulocyte count

59. Name one enzyme deficiency which cause haemolytic aneamia in dog
a) Pyruvate kinase
b) CPK
c) Erythropoietin
d) Transketolase

60. Which one is the cause of corpulmonale
a) Chronic pneumonia and emphysema
b) Atrial fibrillation
c) Myocarditis
d) Diaphragmatic hernia

61. CSF's protein is detected by
a) Heller's test
b) Pandy's test
c) Gmelin test
d) Sulkowitch test

62. Ultrasonography of heart is termed as
a) Phoncardiography
b) Echocardiography
c) Flurography
d) None of the above

63. Snoring respiration is characteristic of
a) Pneumonia
b) Heaves
c) Paralysis of larynx
d) Obstruction of nasal passage

64. Kangaroo sitting position in pigs is due to the deficiency of
a) Riboflavin
b) Pantothenic acid
c) Niacin
d) Biotin

65. Short jerky inspiration caused by stimulation of Phrenic nerve is
a) Hiccough
b) Wheeze
c) Roar
d) None of the above

66. An example of anodyne expectorant
a) Codein
b) Ammonium chloride
c) Potassium iodide
d) Camphor

67. In dogs excessive barking leads to
a) Bronchitis
b) Laryngitis
c) Trachietis
d) Pharyngitis

68. Sporotrichosis is a
a) Fungal disease
b) Bacterial disease
c) Mange
d) Immune mediated disease

69. Neonatal isoerythrolysis is caused by
a) Injection of haemolytic bacterial organism
b) Incompatible blood group reaction
c) Blood protozoan organism
d) None of the above

70. A primary skin lesion
a) Scale
b) Ulcer
c) Pustule
d) Cryst

71. Most common cause of acral lick dermatitis in dogs is
a) Allergy
b) Boredom
c) External parasitism
d) Fungus

72. Frequent dry cough often in paroxysms is seen in
a) Bronchopneumonia
b) Interstitial pneumonia
c) Pneumothorax
d) Bronchitis

73. Peat Scours occurs in calves due to
a) Presence of sulphate in the diet
b) Lack of molybdate in the diet
c) Deficiency of Cu in the diet
d) Excess molybdenum in the diet

74. The type of respiratory embarrassment in pulmonary emphysema is
a) Hyperpnoea
b) Inspiratory dyspnoea
c) Expiratory dyspnoea
d) Oligopnoea

75. Thin soft skin is a characteristic feature in
a) Hypothyroidism
b) Hyperadrenocorticism
c) Hyperoestrogenism
d) Pemphigus vulgaris

76. Site of paracentesis thoracis is
a) 4-5 intercostal space
b) 6-8 intercostal space
c) 9-10 intercostal space
d) 5-6 intercostal space

77. Hepatosis dietetica in swine is caused by
a) Deficiency of Vit.E & Se
b) Feeding of high energy diet
c) Excess of unsaturated fatty acid in the diet
d) All the above

78. White liver disease in sheep results from
a) Cobalt deficiency
b) Copper deficiency
c) Mn deficiency
d) Selenium deficiency

79. Hydrothorax due to CHF: Treatment of choice
a) Blood transfusion
b) Aspiration of fluid from the thoracic cavity
c) Cardiac stimulants
d) Balanced diet with quality protein

80. In Se and Vit.E deficiency, the lesions in muscle is characterized by
a) Hyaline degeneration and ceroid deposition
b) Inflammatory reaction in the muscle tissues
c) Gangrene and necrosis of muscle tissues
d) None of the above

81. Pernicious aneamia is caused by the deficiency of
a) Vit. B_1
b) Folic acid
c) Iron
d) Copper

82. Atopy occur as a result of
a) Allergy to food
b) Allergy due to inhalted antigen
c) Itching of central origin
d) Excessive secretion of sebum

83. Inflammatory reaction of epidermis to substance to which the cells are sensitised is known as
a) Dermatitis
b) Allergy
c) Eczema
d) Pustule

84. Secondary iodine deficiency is usually caused by
a) High Cu intake
b) Hypervitaminosis
c) High Ca intake
d) None of the above

85. Minimum daily requirement of Vit. A in all species is
a) 440 IU/kg bwt
b) 200 IU/kg bwt
c) 40 IU/kg bwt
d) 3000 IU/kg bwt

86. Parakeratosis in swine is due to
a) Zn deficiency
b) Unsaturated fatty acid
c) Inherited factors
d) All the above

87. Corticosteroids are contraindicated in
a) Allergic dermatitis
b) Juvenile pyoderma
c) Demodicosis
d) Nodular panniculitis

88. Sharply circumscribed raised lesions caused by dermal edema
a) Papule
b) Wheal
c) Wart
d) Macule

89. High pitched inspiratory sound indicating upper airway obstruction and audible without the aid of stethoscope
a) Stridor
b) Stertor
c) Rales
d) Wheezes

90. Cobalt deficiency in animals can be detected by
a) Estimation of Methylmalonic acid
b) Estimation of Formiminoglutamic acid
c) Vit. B12 level in the body
d) All the above

91. Perosis in fowl results from deficiency of
a) Riboflavin
b) Zn
c) Thiamine
d) Mn

92. Consumption of raw fish by dogs results in deficiency of
a) Riboflavin
b) Thiamine
c) Vit. C
d) Biotin

93. Yellow fat disease in kitten is due to deficiency of
a) Vit. E
b) Vit. A
c) Vit. C
d) Iodine

94. Barlows disease in dogs can be treated with
a) Vit. C
b) Vit. D
c) Iron
d) None of the above

95. Type of anoxia in HCN poisoning
a) Stagnant anoxia
b) Histotoxic anoxia
c) Anaemic anoxia
d) Anoxic anoxia

96. Steatorrhoea is a feature for dysfunction of
a) Kidney
b) Liver
c) Heart
d) Spleen

97. Myocardial affections are characterized by
a) Murmur
b) Arrhythmia
c) Anemia
d) Muffled heart sounds

98. Cardiac tamponade occur in
a) Effusive pericarditis
b) Endocarditis
c) Myocarditis
d) Dilated cardiomyopathy

99. The i/v dose of epinephrine for the management of shock
a) 0.01 to .02 mg/kg
b) 0 .1 to .2 mg /kg
c) 0.04 mg/kg
d) 0.15 to .2 mg/kg

100. In obstructive jaundice the colour of the faeces is
a) Brownish green
b) Tarry black
c) Dark coloured
d) Clay coloured

101. Flatulent colic in horses is a result of distension of gut with
a) Fluid
b) Gas
c) Ingesta
d) Sand

102. Partial loss of appetite is known as
a) Inappetence
b) Anorexia
c) Anaphagia
d) Dysphagia

103. Anamnesis refers to
a) Clinical diagnosis
b) Case history
c) General inspection
d) Palpation

104. Abducted elbows and careful gait are associated with
a) TRP
b) Traumatic pericarditis
c) Pleurisy
d) All the above

105. Mediastinal lymphnode enlargement in cattle results in
a) Frothy bloat
b) Constipation
c) Free gas bloat
d) None of the above

106. An example of centrally acting antiemetic is
a) Sucralfate
b) Metoclopramide
c) Triple carb
d) Ice water

107. Ballotment is a combination of
a) Inspection and palpation
b) Palpation and percussion
c) Inspection and percussion
d) Percussion and auscultation

108. An example of styptic is
a) Thrombin application locally
b) Epinephrine locally
c) Adrenochrome parenterally
d) All the above

109. Epistaxis can be treated with
a) Vitamin E
b) Vitamin B_1
c) Vitamin C
d) Vitamin K

110. The most common type of fever in veterinary practice
a) Intermittent
b) Atypical
c) Relapsing
d) Undulant

111. The primary modes or causes of death include
a) Coma
b) Syncope
c) Asphyxia
d) All the above

112. Mischief is punishable under the section
a) IPC 328 and IPC 329
b) IPC 428 and IPC 429
c) IPC 228 and IPC 229
d) IPC 325 and IPC 426

113. Bestiality is punishable under the IPC
a) IPC 377
b) IPC 420
c) Both a and b
d) None of the above

114. Bishoping is punishable under
a) IPC 127
b) IPC 420
c) IPC 426
d) None of the above

115. First report in vetero-legal case is called as
a) First information report
b) Inquest
c) Primary report
d) All of the above

116. High court in Kerala is situated at
a) Trivandrum
b) Ernakulam
c) Quilon
d) None of the above

117. Wound produced due to sharp knife is
a) Punctured wound
b) Incised wound
c) Lacerated wound
d) Contused wound

118. Adulteration of ghee is done by adding
a) Vegetable oils
b) Sesame oil
c) Animal fat
d) All the above

119. Adulteration of ghee by vegetable oil is detected by
a) Phytosterol acetate test
b) Boudin test
c) Iodine test
d) None of the above

120. Nitrates in milk indicate
a) Addition of skim milk
b) Addition of water
c) Addition of preservatives
d) Addition of sugar

121. In ante mortem wounds, there will be presence of
a) Inflammatory reaction
b) Bleeding
c) Healing
d) All the above

122. Livestock Importation act was implemented in the year
a) 1898
b) 1897
c) 1895
d) 1889

123. Serological test used to detect adulteration of meat is
a) AGPT
b) Iodine value
c) Both a and b
d) None of the above

124. Segregation of all suspected or unvaccinated animals is termed as
a) Preventive measure
b) Separation period
c) Quarantine
d) None of the above

125. The period of quarantine for any livestock can be upto
a) 60 days
b) 20 days
c) 90 days
d) 10 days

126. Most common fixative used for preserving samples for histopathological examination is
a) Ethanol
b) Methanol
c) 50 % glycerol saline
d) 10 % formalin

127. The colour of fat in buffalo meat is
a) Pale yellow
b) Dark grey
c) Pale white
d) Golden yellow

128. The meat with ammoniacal odor is
a) Beef
b) Chevon
c) Mutton
d) Pork

129. Mixing of meat of different species of animals or mixing superior quality with inferior quality meat is termed as
a) Emulsification
b) Falsification
c) Deterioration
d) None of the above

130. Rapid and painless method of humane killing of animals is
a) Maiming
b) Bestiality
c) Euthanasia
d) None of the above

131. Euthanasia in small animals is commonly done using
a) Sodium pentobarbitone
b) Sodium thiosulfate
c) Barbituric acid
d) None of the above

132. Inhalant anaesthetics used in euthanasia include
a) Chloroform
b) Carbon monoxide
c) Carbon dioxide
d) All of the above

133. Fat percentage in milk can be detected by
a) Gerber's butyrometer
b) Lactometer
c) Both a and b
d) None of the above

134. Term that describes desiccation of carcass due to evaporation of water
a) Mummification
b) Dehydration
c) Both a and b
d) None of the above

135. Heart sounds can be recorded using
a) Electrocardiiograph
b) Echocardiograph
c) Phonocardiograph
d) Phonorumenograph

136. Post mortem examination is done to
a) Ascertain time of death
b) Know the cause of death
c) Both a and b
d) None of the above

137. The witness who testifies to the facts observed by him is known as
a) Expert witness
b) Skilled witness
c) Common witness
d) Hostile witness

138. Veterinary evidence given before court of law comprises
a) Documentary evidence
b) Oral evidence
c) Both a and b
d) None of the above

139. Bishoping is a method for
a) Offence against animals
b) Fraudulent sale of animals
c) Fraudulent sale of livestock products
d) None of the above

140. The normal type of respiration in dogs and cats is
a) Costal
b) Costo-abdominal
c) Abdominal
d) All of the above

141. Pulse of an elephant is taken at
a) Middle coccygeal artery
b) External maxillary artery
c) Ear artery
d) None of the above

142. The most appropriate diagnostic equipment to detect cardiac arrhythmias in dogs is
a) ECG
b) EEG
c) Echocardiography
d) None of the above

143. The normal rumen liquor pH of cattle is
a) 6.5 – 8.5
b) 4.5 – 5.0
c) 6.0 – 7.0
d) None of the above

144. In cattle the rumen motility is noted at
a) Middle of left paralumbar fossa
b) Right paralumbar fossa
c) Both a and b
d) None of the above

145. The normal colour of mucous membrane in buffalo is
a) Pale pink
b) Slightly icteric
c) Brick red
d) Pale

146. Intraocular pressure is determined by
a) Schiotz tonometer
b) Otoscope
c) Opthalmoscope
d) Slit-lampbiomicroscope

147. Presence of blood in the last part of urination indicates bleeding from
a) Urethra
b) Urinary bladder
c) Kidney
d) All of the above

148. In mastitic milk, there is
a) Rise in alkalinity
b) Increase in chloride content
c) Increase in number of leukocytes
d) All the above

149. When the pulse rate increases and its strength decreases, it is
a) Running down pulse
b) Bounding pulse
c) Thready pulse
d) None of the above

150. The physical examination of animal which involves shaking the body to detect presence of fluid is known as
a) Palpation
b) Succussion
c) Auscultation
d) Mensuration

151. In cattle William's method of auscultation is used to diagnose
a) Traumatic reticulo-peritonitis (TRP)
b) Vagal indigestion
c) LDA
d) RDA

152. Accumulation of fluid in the thoracic cavity is known as
a) Pneumothorax
b) Hydrothorax
c) Both a and b
d) None of the above

153. Decreased respiratory rate is termed as
a) Apnoea
b) Orthopnoea
c) Oligopnoea
d) Dyspnoea

154. Presence of undigested blood in the faeces is called
a) Haematochezia
b) Odynophagia
c) Hepatodynea
d) None of the above

155. Voiding of small quantities of faeces mixed with fresh blood and mucus indicates
a) Large bowel diarrhoea
b) Small bowel diarrhoea
c) Gastritis
d) None of the above

156. Accumulation of pus in anterior chamber of eye is termed as
a) Hypopion
b) Hyphaema
c) Haemopthalmia
d) None of the above

157. Water-belly condition occurs in male due to
a) Rupture of urinary bladder
b) Rupture of urethra
c) Rupture of ureter
d) None of the above

158. Papple shaped abdomen will be observed in
a) TRP
b) LDA
c) RDA
d) Vagal indigestion

159. In cattle Sodium thiosulfate is used to treat the poisoning with
a) Organophosphate
b) HCN (Cyanide)
c) Nitrate
d) None of the above

160. Blackish oral ulcers in dog denotes the condition
a) Uraemia
b) Hypocalcaemia
c) Pericarditis
d) None of the above

161. Normal intestinal sounds are termed as
a) Resonance
b) Tympanic sound
c) Borborygmus
d) None of the above

162. In cattle, bloat can occur in association with
a) Milk fever
b) Tetanus
c) Tuberculosis
d) All of the above

163. The elevation in body temperature due to pyrogens and regardless of temperature of external environment is termed as
a) Fever
b) Hyperthermia
c) Heat stroke
d) None of the above

164. Fever that subsides within 24-48 hrs after its development is
a) Simple fever
b) Transient fever
c) Remittent fever
d) All of the above

165. Increased C.S.F pressure is clinically important in
a) Hypovitaminosis A
b) Hyperthermia
c) Gastritis
d) None of the above

166. Transient loss of consciousness due to ischemia or a consequence of less supply of oxygen to brain leads to
a) Syncope
b) Coma
c) Epilepsy
d) None of the above

167. The act that makes offences like beating and starving of animals punishable is
a) Prevention of cruelty to animals act
b) 420 IPC
c) Cattle Cruelty act
d) Dourine act

168. A chemical test used to detect the presence of seminal stains
a) Lecomalachite green test
b) Benzidine test
c) Calorie test
d) Barberio's test

169. Glycogen content of meat is highest in
a) Goat
b) Sheep
c) Cattle
d) Horse

170. Injury caused by compression or blow of a blunt weapon without loss of continuity of skin is termed as
a) Contusion
b) Abrasion
c) Laceration
d) Incision

171. An example of plasma volume expander is
a) Gelatin
b) 0.89% Normal Saline
c) 2.5% Dextrose
d) Ringers lactate

172. Total loss of voluntary movement in the limb (s) on one side of the body is
a) Hemiplegia
b) Mydriasis
c) Myoclonus
d) Myotonia

173. Raw egg white injury is caused by the deficiency of
a) Biotin
b) Choline
c) Vitamin B 12
d) Pyridoxine

174. Copper exerts its physiologic effect through the copper containing enzyme
a) Ceruloplasmin
b) FIGLU
c) Methylmalonic acid
d) CPK

175. White liver disease in sheep results from deficiency of
a) Copper
b) Phosphorous
c) Cobalt
d) Selenium

176. Glutathione peroxidase is associated with
a) Copper
b) Phosphorous
c) Cobalt
d) Selenium

177. Sway back in lambs is associated with the deficiency of
a) Copper
b) Phosphorous
c) Cobalt
d) Selenium

178. Falling disease of cattle is considered to be associated with the deficiency of
a) Copper
b) Phosphorous
c) Cobalt
d) Selenium

179. Hepatosis dietetica of swine is due to deficiency of
a) Copper
b) Phosphorous
c) Cobalt
d) Vitamin E –Selenium

180. Chastek paralysis in cats is due to deficiency of
a) Vitamin A
b) Vitamin B1
c) Pantothenic Acid
d) Nicotinic acid

181. Black tongue in dogs is due to deficiency of
a) Vitamin A
b) Vitamin B1
c) Pantothenic Acid
d) Nicotinic acid

182. Goose stepping gait in swine is due to deficiency of
a) Vitamin A
b) Vitamin B1
c) Pantothenic Acid
d) Nicotinic acid

183. Xerophthalmia in calves is associated with deficiency of
a) Vitamin A
b) Vitamin B1
c) Pantothenic Acid
d) Nicotinic acid

184. Omeprazole is a
a) Proton pump inhibitor
b) H2 receptor antagonist
c) H1 receptor antagonist
d) Cytoprotectant

185. Normal serum Magnesium level in cattle is in the range of
a) 1.7-3 mg /dl
b) 3.5 -4.7 mg /dl
c) 4.7 – 5.9 mg /dl
d) 5.9 – 7.1 mg /dl

186. Normal serum Calcium level in cattle is in the range of
a) 5.9 – 7.1 mg /dl
b) 8.5 – 10.0 mg / dl
c) 12.0-13.5 mg/ dl
d) 3.5 – 5.0 mg /dl

187. An antagonist of Copper associated with secondary Copper deficiency
a) Molybdenum
b) Sodium
c) Cobalt
d) Potassium

188. Primary ketosis is also called as
a) Production Ketosis
b) Starvation ketosis
c) Alimentary ketosis
d) Ketosis due to nutritional deficiency

189. On Ultrasonography, clear fluid appears
a) Anechoic
b) Hyperechoic
c) Hypoechoic
d) Isoechoic

190. Clinical finding that is not associated with large bowel diarrhea is
a) Melena
b) Dyschezia
c) Tenesmus
d) Urgency to defecate

191. Clinical finding that is not associated with small bowel diarrhea is
a) Melena
b) Increased volume
c) Variability in colour
d) Increased frequency

192. Myxedema is associated with
a) Hypothyroidism
b) Hypoadrenocorticism
c) Hyperthyroidism
d) Hyperadrenocorticism

193. Modified water deprivation test is useful in the diagnosis of
a) Diabetes insipdus
b) Hypothyroidism
c) Diabetes mellitus
d) Pancreatic insufficiency

194. Cretinism is associated with
a) Hypothyroidism
b) Hypoadrenocorticism
c) Hyperthyroidism
d) Hyperadrenocorticism

195. Serum fructosamine estimation is useful in the diagnosis of
a) Diabetes insipdus
b) Hypothyroidism
c) Diabetes mellitus
d) Pancreatic insufficiency

196. Glycosylated Haemoglobin estimation is used to diagnose
a) Diabetes insipdus
b) Hypothyroidism
c) Diabetes mellitus
d) Pancreatic insufficiency

197. Misoprostol is a
a) Prostaglandin analogue
b) Anabolic agent
c) H2 Receptor antagonist
d) Antibacterial

198. Perosis in fowl results from deficiency of
a) Manganese
b) Phosphorous
c) Magnesium
d) Zinc

199. Most common clinical sign in congenital cardiac disease in pups is
a) Congested mucosa
b) Cyanosis of mucosa
c) Pallor of mucosa
d) Injected mucosa

200. Sinus arrhythmia is characterized by
a) Normal in aged animals
b) Abnormal in all animals
c) Normal in exercised animals and due to vagal tonicity
d) Normal in young animals

201. Smallest blood vessel available for clinical examination is
a) Oral blood vessels
b) Vaginal blood vessels
c) Episcleral blood vessels
d) Prepucial blood vessels

202. Angiotensin II receptor blocker is
a) Losartan
b) Captopril
c) Enalapril
d) Digoxin

203. Diltiazem is a
a) Proton pump inhibitor
b) Sodium channel blocker
c) Calcium channel blocker
d) ACE inhibitor

204. Systolic murmur occur associated with
a) AV valve insufficiency and pulmonary/aortic valve stenosis
b) Pulmonary/aortic valve insufficiency or stenosis of AV valves
c) Anemia
d) Pericarditis

205. Aleukemic leukemia is characterized by
a) Increased WBC Count in circulation
b) Increased number of abnormal WBCs in circulation
c) Normal WBC count in circulation with tissue infiltration of leukocytes
d) Reduced number of WBCs in circulation

206. Effusive phase of traumatic pericarditis in cattle is characterized on auscultation by
a) Pericardial rubbing
b) Muffled heart sounds
c) Systolic murmur
d) Diastolic murmur

207. Anemia along with dehydration cause
a) Pale, moist mucus membrane
b) Pale, dry mucus membrane
c) Normal, pink mucus membrane
d) Pale, icteric mucus membrane

208. Adrenaline is contraindicated in all types of shock except
a) Cardiogenic
b) Anaphylactic
c) Hypovolemic
d) Vasogenic

209. Regenerative anemia is characterized by
a) Decreased RBC & Hb
b) Increased reticulocyte count
c) Decreased platelet count
d) Decreased PCV

210. AV block in ECG is characterized by
a) Deep Q wave
b) Prolonged R wave
c) Solitary P wave without QRS complexes
d) Occasional missing of PQRST complexes

211. 'P' pulmonale indicates
a) Increased amplitude of P wave
b) Abnormal P wave in pneumonia
c) Increased P wave duration
d) Bifid P wave

KEY ANSWERS

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
b	d	b	a	b	d	c	c	c	b	b	c	b	a	b
16	17	18	19	20	21	22	23	24	25	26	27	28	29	30
a	b	b	c	b	a	b	c	a	b	c	d	b	b	a
31	32	33	34	35	36	37	38	39	40	41	42	43	44	45
b	a	a	a	a	a	b	b	c	c	b	d	a	a	a
46	47	48	49	50	51	52	53	54	55	56	57	58	59	60
a	d	a	a	b	b	a	a	a	c	a	b	d	a	a
61	62	63	64	65	66	67	68	69	70	71	72	73	74	75
b	b	d	d	a	a	b	a	b	c	b	d	c	c	b
76	77	78	79	80	81	82	83	84	85	86	87	88	89	90
b	a	a	c	a	b	b	b	c	c	a	c	b	a	d

91	92	93	94	95	96	97	98	99	100	101	102	103	104	105
d	b	a	a	b	b	b	a	b	d	b	a	b	d	c
106	107	108	109	110	111	112	113	114	115	116	117	118	119	120
b	b	d	d	b	d	b	a	b	b	b	b	a	a	b
121	122	123	124	125	126	127	128	129	130	131	132	133	134	135
d	a	a	c	c	d	c	c	b	c	a	d	a	a	c
136	137	138	139	140	141	142	143	144	145	146	147	148	149	150
c	c	c	b	a	c	a	c	a	c	a	b	d	a	b
151	152	153	154	155	156	157	158	159	160	161	162	163	164	165
a	b	c	a	a	a	a	d	b	a	c	d	a	b	a
166	167	168	169	170	171	172	173	174	175	176	177	178	179	180
a	a	d	d	a	a	a	a	a	c	d	a	a	d	b
181	182	183	184	185	186	187	188	189	190	191	192	193	194	195
d	c	a	a	a	b	a	a	a	a	d	a	a	a	c
196	197	198	199	200	201	202	203	204	205	206	207	208	209	210
c	a	a	b	c	c	a	c	a	c	b	c	b	b	c
211														
a														

II. Fill in the blanks:

1. Oval area of ..... sound can be appreciated on percussion and auscultation in left displacement of abomasum.
2. Loud crackling sound will be heard on auscultation of lung with .....
3. ..... sound will be noticed on auscultation of cardiac area of a cow with pericarditis.
4. ..... will take upperhand in the microbial flora in goats with acute rumen acidosis.
5. ..... levels will get elevated in acute renal failure.
6. In ..... deficiency induced skin disorder the pattern of hair loss will be symmetrical.
7. Percussion of liver area will give ..... sound.
8. Measurement of ..... pressure is advocated in the investigation of intracranial masses.
9. In peracute acidosis the heart rate range will be ..... per minute.
10. Heart sound will be ..... in cow with milk fever at lateral recumbency.
11. ..... odour is appreciated from breath in animal with ketosis.
12. Vitamin ..... is used as a control measure in milk fever.
13. Normal total serum calcium level in cow is ..... mg per dl.
14. Circling is noticed in ..... in cattle.
15. ..... is process of introducing air into female organ of a cow with the object of getting more milk.
16. Postparturient hemoglobinuria is caused by ..... deficiency.
17. ..... are prominent signs of hypomagnesaemia in cattle.
18. ..... biopsy is a satisfactory source of material for estimation of copper status.
19. Iron deficiency is commonly seen in .....
20. Three types of frauds include .....
21. The punishment for cruelty is for three months under the ..... of 1960.

22. In suspected cases of organophosphate poisoning should be sent for chemical analysis.
23. Toxins can be classified as .....
24. Septicemia is a common cause of ..... in new born animals.
25. The ideal instrument for auscultation in ruminants is .....
26. Stomatitis may be caused by .....
27. The field diagnosis of TRP is made by .....
28. Sudden onset of fainting is termed as .....
29. The intravenous administration of ..... may cause a reduction in the degree of ionization of calcium.
30. The serum enzymes ..... levels are markedly elevated in a downer cow.
31. Azoturia is a disease of horses characterized by .....
32. ..... is the major organ of magnesium homeostasis and can conserve magnesium in animals.
33. Fat cow syndrome can be diagnosed by .....
34. Zinc deficiency in farm animals leads to .....
35. ..... occurs only in ewes in late pregnancy.
36. The common parenterally used iron preparations are .....
37. ..... may be defined as a branch of veterinary medicine which covers the application of the principles and knowledge of veterinary medicine for the purpose of the law.
38. ..... are the two kinds of witnesses.
39. Frauds in the sale of livestock are punishable under section .....
40. Chronic form of selenium toxicity is called .....
41. The act to prevent spread of dourine is called .....
42. Liptak test is used for the diagnosis of .....
43. T wave in ECG indicates .....
44. Tonometer is used for assessing .....
45. Administration of ivermectin is best avoided in ..... breed of dogs.
46. ..... puncture is the preferred site for collection of cerebro spinal fluid in dogs.
47. Presence of free gas in the subcutaneous tissue is called as .....
48. Medical dissolution of urate calculi can be tried with .....
49. Paralysis of the hind part of the body is called as .....
50. To differentiate central blindness from peripheral blindness, ... should be examined.
51. Of the abnormal lung sounds, ... are continuous and ..... are discontinuous.
52. Basic biochemical defect in parturient paresis is the depression of .....
53. Alimentary ketosis is considered to be due to large amounts of ..... in silage.
54. 'Goose stepping gait' of pigs is associated with the deficiency of .....
55. ..... is a metabolic form of vitamin D which plays an important role in intestinal absorption of calcium.
56. Iron deficiency in piglets results in ..... (type) anemia.
57. Feeding of raw fish leads to ..... deficiency in cats.
58. A reliable indicator of vitamin E deficiency is the enzyme, ...
59. ..... turbidity test is a method of assessing the immunoglobulin status in calves.
60. Normal serum magnesium level in cattle is ..... mg/dl.
61. Mini metabolic profile test includes estimation of .....
62. Estimation of methylmalonic acid is useful in the diagnosis of ..... deficiency.

63. Poisoning, killing or maiming an animal is punishable under sections ..... IPC.
64. Horses brought into the country and suspected to be affected with infectious or contagious disease can be regulated under .....
65. A ..... (instrument) can be used to determine the specific gravity of milk.
66. The smell of 'bitter almonds' is associated with ..... poisoning.
67. Altering the appearance of a horse with the intention of making it appear young is termed as .....
68. In ketosis, blood glucose levels are reduced from the normal of ..... in cattle and sheep.
69. In Azoturia death is due to .....
70. ..... is the copper containing enzyme through which copper exerts its physiological function.
71. The recommended ratio of calcium:phosphorus in the diet is .....
72. Lactation tetany is characterized by .....
73. The pH of the normal rumen fluid ranges between ..... in cows.
74. The most satisfactory instrument for liver biopsy is .....
75. ..... is a condition characterized by the presence of bran like scales on the skin surface.
76. Peritoneal fluid examination is of vital importance in horses in the differential diagnosis of ..... and in cattle in the diagnosis of .....
77. Common causes for tenesmus in cattle include .....
78. Glycosuria in combination with ketonuria occurs only in .....
79. Intra muscular injection site in dog is .....
80. ..... are the three common offenses against animals in India.
81. The common cause of death due to drowning is .....
82. A positive jugular pulse is characteristic of ..... valve insufficiency.
83. Adulteration of food or drink to make it noxious is punishable under .....
84. Dependent oedema and ascites are associated with ..... sided cardiac failure.
85. Spastic paresis of hind legs and flaccid paresis of fore legs suggests damage to ..... segment of spinal cord.
86. Urate calculi occur primarily in ..... breed of dogs.
87. Enlargement of end of long bones and costochondral junctions of ribs is commonly associated with ..... in dogs.
88. ..... is used as a sensitive biochemical test in cattle to detect blood in dung.
89. Tests commonly employed to assess eye sight (vision) of dogs are .....
90. Metabolite of chlorophyll commonly implicated in hepatogenous photosensitization is .....
91. Calves presented with ruminal tympany associated with incomplete closure of reticular groove are called as .....
92. Herbivores are less likely to suffer from deficiency of water soluble vitamins as except for ..... all other water soluble vitamins are synthesized in the intestinal tract.
93. Nutritional secondary ..... is a common endocrine change associated with osteodystrophia fibrosa in horses.
94. ..... is advertent or inadvertent use of forbidden substances to affect the performance of animals.
95. ..... is a rigidity of the body caused by muscles contracting after death from chemical changes within muscle tissue.

134. Mischief is punishable under the section .....
135. Name a bacterial disease for which no claim is admissible for dead animals as per insurance rules .....
136. ..... is a syndrome in which hyperthermia and toxemia are produced by substances circulating in the blood stream.
137. Prerequisites for the development of abomasal displacement are .....
138. The important clinical signs of valvular diseases are .....
139. Foul smell from nasal cavity is called as .....
140. ..... is a continuous, repetitive twitching of the skeletal muscles.
141. ..... are the major precursors for gluconeognesis.
142. Concentrations of ..... in urine is considered to be a reliable indicator of cobalt status of lambs.
143. ..... is the most common significant artifact developed after death.
144. Manganese plays an active role in bone matrix formation and synthesis of ..... responsible for maintaining rigidity of connective tissue.
145. ..... is a chronic hypertrophy of the horn producing tissues of the foot.
146. In suspected copper poisoning the required material of importance for chemical analysis is .....
147. In legume bloat ..... is the primary foaming agent.
148. Site for paracentesis in left abomasal displacement in a cow is .....
149. Common viral causes of enteritis in pigs are .....
150. Sudden death in cases of traumatic reticuloperitonitis is due to rupture of .....
151. In peripheral circulatory failutre, fluid to be administered as long as central venous pressure remains below .....
152. Life threatening complications of acute renal failure can be .....
153. Urinary pH will be ..... in urinary tract infection.
154. In ECG, appearance of only QRS complex, base line undulations without 'P' wave indicates .....
155. Dosage of digoxin in a dog is .....
156. Diagnostic test of choice in diagnosis of pancreatitis is .....
157. Proteinuria seen in cases of Downer Cow Syndrome is the result of the release of ..... from damaged muscle.
158. ..... is always the primary cause of hypoglycaemia of piglets.
159. Blood glucose levels of less than ..... is considered as pathognomonic in cases of baby pig disease.
160. The normal blood iodine level in cattle is ..... of protein bound iodine per 100ml of plasma.
161. In cattle absorption of calcium and phosphorous is better when they are provided at the ratio of .....
162. ..... serum pH increases calcium concentration.
163. CSF concentration of magnesium is usually ..... than serum concentration.
164. Sway back or enzootic ataxia is mainly due to deficiency of .....
165. ..... is a major source of Vitamin A for the calf.
166. .....breed of cows are more susceptible for milk fever.
167. Copper deficiency causes ..... type of anaemia in ruminants.
168. ..... is required for synthesis of essential Vitamin B12 by rumen microflora in ruminants.
169. The minimum quantity of the fat specimen to be sent for toxicological examination is .....
170. Mischief against animals is punishable under Sections .....

171. The presence of ..... in the milk is sure test of adulteration of milk by adding water.
172. Iodine value of horse fat is .....
173. Presence of inflammation around the injury and changes of colour in carcass indicates that age of injury is probably ..... hours before death.
174. ..... is the commonest method of mischievous killing of animals.
175. ..... is a commonly used mydriatic in dogs.
176. ..... is a liver specific enzyme of cattle.
177. Ausculation of reticulum is carried out between the ..... intercostals space on left side in cattle.
178. Normal creatinine value in dogs is .....
179. Caloric test is used to test the .....
180. In-coordinated movement of limbs is called as .....
181. Sucralfate is an agent used for the management of .....
182. ..... denotes bad odour from mouth.
183. Prepartum diets high in ..... are associated with an increased incidence of milk fever.
184. ..... in late pregnant ewes could induce neonatal hyperthyroidism hypoinsulinemia in their progeny.
185. Normal level of ionized calcium in venous whole blood of cow is .....
186. In sheep, the recommended amount of calcium borogluconate is .....
187. ..... is capable of abolishing the arrhythmia resulting from calcium over dosage in cattle.
188. The dose of protamine zinc insulin in ketosis is ..... per animal SC.

KEY ANSWERS

1	**Ping**	2	**Interstitial pulmonary Emphysema / pneumonia**
3	**Pericardial friction**	4	**Gram positive bacteria**
5	**BUN and Creatinine**	6	**Hormonal**
7	**Dull**	8	**CSF**
9	**110-130**	10	**Inaudible**
11	**Ketone**	12	**D**
13	**9-12**	14	**Listerosis**
15	**Phooka**	16	**Phosphorus**
17	**Hyperaesthesia and Tetany**	18	**Liver**
19	**Piglets**	20	**Frauds in the sale of livestock, milk and meat**
21	**PCA Act No.17**	22	**Blood, liver and stomach contents**
23	**Endotoxins and Exotoxins**	24	**Mortality**
25	**Phonendoscope**	26	**Physical and chemical agents**
27	**Wither pinch and Williams method of auscultation**	28	**Syncope**
29	**Ainoglycoside antibiotic**	30	**CPK and AST**
31	**Moglobinuria and muscular degeneration**	32	**Kidney**
33	**Liver biopsy**	34	**Parakeratosis**

96. Chastek's paralysis is associated with deficiency of .....
97. The nervous signs that occur in some cases of bovine ketosis are caused by production of .....
98. Animals exhibiting nonspecific signs like agalactia and anorexia before the first stage of parturient paresis are in .....
99. Diarrhoea and in coordination with a spastic goose stepping gait in pigs are characteristics of .....
100. Hydrogenation of pre-existing fats when carcass is kept under moist conditions results in the formation of .....
101. Rape, turnips and cruciferous plants are low in .....
102. The act that governs the minimum standards of veterinary education required for granting a recognized veterinary qualification is .....
103. Glycogen content of meat of ..... (species) is considerably higher than meat of other species of animals and is a useful guide to detect adulteration.
104. Leucomalachite green test is used to detect .....
105. Injury caused by compression or blow of a blunt weapon without loss of continuity to the skin is termed as .....
106. The most common liver specific enzyme in canines is .....
107. The strength of isotonic sodium bicarbonate solution is .....
108. Auscultation of heart is carried out at ..... (site).
109. A set of characteristic symptoms suggesting a disease is called as .....
110. Examination of interior of body cavity otherwise not visible to the exterior is known as .....
111. Infections that are acquired by faulty medical/surgical procedures are called as .....
112. The dye that is employed for testing the function of liver is .....
113. In peracute acid indigestion the rumen fluid pH varies around .....
114. In nasal schistosomiasis ..... type of dyspnoea is noted.
115. Selenium is a biochemical component of the enzyme .....
116. Presence of transudate in pleural cavity is known as .....
117. The outstanding manifestation of acute gastritis in a pup is .....
118. The average serum calcium level is ..... mg/dl in cattle.
119. Piglets on concrete floor under confinement are likely to suffer from ..... deficiency.
120. Peat scours in calves is caused by deficiency of .....
121. ..... is an anti oxidant that prevents oxidative damage to sensitive membrane lipids by decreasing hydro peroxide formation.
122. The critical blood glucose level in a cow is ..... below which it is vulnerable for ketosis.
123. Sweet clover poisoning can be treated by administering .....
124. The normal random blood glucose in a dog is .....
125. The typical posture adopted by a cow in the second stage of milk fever is .....
126. Increase in the level of ..... (hormone) in plasma is indicative of pregnancy toxaemia in ewes.
127. Iron deficiency causes ..... type of anaemia.
128. An example of documentary evidence is .....
129. An example of cruelty against animals .....
130. Making an animal useless by the use of violence is called as .....
131. The chief effect of electric shock in animals is .....
132. Failure of respiration before the heart stops functioning is called as .....
133. Beastiality means .....

35	Pregnancy toxaemia	36	Iron dextran and iron sorbitol citric acid complex (or iron saedierats or gluconate)
37	Veterinary Jurisprudence	38	Common and Expert
39	420 IPC	40	Blind Staggers
41	Dourine Act 1910	42	LDA
43	Ventricular repolarisation	44	Intra ocular pressure
45	Collie	46	Occipito atlanto
47	Emphysema	48	Allopurinol
49	Paraplegia	50	Menace and pupillary light reflex
51	Wheezes; crackles	52	Serum ionized calcium
53	Butyrate	54	Pantothenic acid
55	1, 25 DHCC	56	Microcytic, hypochromic
57	Thiamine	58	Glutathione peroxidase
59	Zinc sulfate	60	1.7-3
61	Glucose and BUN or Albumin	62	Cobalt
63	428 and 429	64	The glanders & Farcy act of 1899
65	Lactometer	66	Hydrocyanic acid
67	Bishoping	68	50 mg/dl to 20-40 mg/dl
69	Muscle degeneration and renal failure	70	Ceruloplasmin
71	1:1 to 2:1	72	Hyperaesthesia and Tetany
73	5.5 and 7	74	Vim Silverman/True cut needle
75	Pityriasis	76	Colic; TRP/Peritonitis
77	Large intestinal and Genital tract diseases	78	Diabetes mellitus
79	Gluteus	80	Mischief, Cruelty and Bestiality
81	Asphyxia	82	Tricuspid
83	IPC section 272	84	Right
85	T3 to L3 (thoracolumbar)	86	Dalmatian
87	Rickets	88	Benzidine test/gum guiac
89	Obstacle and Cotton ball test	90	Phylloerythrin
91	Ruminal drinkers	92	Vitamin B_{12}
93	Hyperparathyroidism	94	Doping
95	Rigor mortis	96	Thiamine
97	Isopropyl alcohol	98	Prodromal stage
99	Pantothenic acid deficiency	100	Adipocere
101	Phosphorus	102	VCI Act
103	Horse	104	Blood stain
105	Contusion	106	ALT
107	1.3%	108	3-6 rib
109	Pathognomonic signs	110	Endoscopy/Laproscopy
111	Iatrogenic	112	BSP
113	<5	114	Inspiratory
115	Glutathione peroxidase	116	Hydrothorax
117	Vomiting	118	9-12
119	Fe	120	Copper
121	Vit.E	122	40 mg%

123	**Vitamin K analogue**	124	**80-120 mg%**
125	**Sternal recumbancy with lateral kink in the neck**	126	**Cortisone**
127	**Microcytic hypochromic**	128	**Veterinary Certificate**
129	**Kicking**	130	**Maiming**
131	**Cardiac failure**	132	**Respiratory/Pulmonary arrest**
133	**Unnatural sex with animal /man against the order of the nature**	134	**428, 429 IPC**
135	**Haemorrhagic septicaemia**	136	**Fever**
137	**Grain feeding and gaseous distension**	138	**Murmurs and Precordial thrill**
139	**Ozaena**	140	**Tremor**
141	**Glycerol and amino acids**	142	**MMA**
143	**Putrefaction**	144	**Chondroitin SO4**
145	**Canker**	146	**Liver.**
147	**Leaf cytoplasmic protein**	148	**10-11 intercostal space in middle one third of left abdominal wall**
149	**Corona, Rota and TGE**	150	**Gastro Epiploic artery**
151	**5 mm of water**	152	**Dehydration/Hyperkalemia/ Severe metabolic acidosis**
153	**Alkaline**	154	**Atrial fibrillation**
155	**0.011 mg/kg. (0.005-0.01 mg/kg or 0.22 mg/M^2)**	156	**Serum tripsin like immuno reactivity**
157	**Myoglobin**	158	**An inadequate intake of milk**
159	**50 mg/dl**	160	**2.4 - 14 microgram**
161	**2:1**	162	**Acidic**
163	**Greater**	164	**Copper**
165	**Colostrum**	166	**Jersey**
167	**Microcytic hypochromic**	168	**Cobalt**
169	**200g**	170	**428 and 429 IPC**
171	**Nitrates**	172	**71-86**
173	**24**	174	**Poisoning**
175	**Tropicamide**	176	**SGOT/GGT**
177	**6th to 8th**	178	**0.5 to 1.5 mg/dl**
179	**VIII Cranial nerve/Vestibulo cochlear**	180	**Ataxia**
181	**Gastric ulcer**	182	**Halitosis**
183	**Na/K and Calcium**	184	**Hypocalcemia**
185	**4.3 to 5.1 mg/dl**	186	**15-25 g IV**
187	**Atropine**	188	**200-300 IU**

III. True or False:

1. Low threshold tension receptors in cranial ruminal wall will excite the gastric center and increase the primary ruminal motility.
2. Papple shaped abdomen indicates vagal indigestion.
3. Bloat occurs due to increased gas production.
4. Ringers lactate is a drug of choice for peracute acidosis.
5. Murmurs on auscultation of heart denotes valvular defects.

6. Tenesmus is frequently noticed in large intestine disease.
7. Photosensitization may occur in liver disease in sheep.
8. Pericarditis results in arrhythmia.
9. Percussion of lung area of healthy cow will give a tymphanic sound because of air inside the lung.
10. Sunken eyes noticed in glaucoma.
11. To get more information from owners leading questions should be asked.
12. Abomasal auscultation is helpful in diagnosing abomasitis.
13. Tetany is a classical sign of milk fever.
14. Head turn to flank is a typical sign noticed in hypomagnesaemia.
15. Pupillary light reflex may be absent in buffaloes with milk fever.
16. Long distance transport may also lead to hypocalcemia in ovines.
17. Downer cow responds well with calcium therapy.
18. Xylidyl blue test is used for detecting hypomagnesaemic tetany.
19. Chewing movement with excess salivation noticed in cow with ketosis.
20. Potassium deficiency can lead to creeper cow.
21. Iron deficiency will lead to postparturient hemoglobinuria in buffaloes.
22. Steely wool occurs due to copper deficiency.
23. Muscular dystrophy occur due to diets deficient in Vit.E for long periods.
24. In non-alert downer cows, prognosis is poor.
25. A Veterinary practitioner is legally bound to carry out euthanasia.
26. Bishoping is the process of making an aged animal look younger.
27. The sale of meat considered unfit for human consumption on religious grounds is a cognizable offence.
28. Hyperkalaemia is potentially more life threatening than hypokalaemia.
29. Frothy bloat is usually a primary bloat in cattle on leguminous pasture.
30. Cholecystography permits visualization of the gall bladder.
31. Heart rate is not the useful indicator of the severity of the colic and its progression in horses.
32. Digoxin is used in dogs for the treatment of congestive heart failure.
33. Myoglobin in urine is an evidence of severe muscle damage.
34. Pneumothorax is unilateral in horses.
35. Andhidrosis occurring primarily in horses in hot humid climate.
36. Hysteria in sows at farrowing is a common occurrence.
37. In pylonephritis, the urine is always normal.
38. Caloric or rotatory test is useful to test radial nerve.
39. Anabolic steroids are not effective in ketosis in cows.
40. Parturient paresis is rare in cows.
41. Overfeeding in late lactation and during the dry period can result in the fat cow syndrome.
42. Copper plays an important role in tissue oxidation by supplementary cytochrome oxidase system.
43. Blood cholesterol have been used as an indicator of thyroid function in cattle.
44. Mini metabolic profile test includes blood glucose and BUN and Albumin.
45. Magnesium is absorbed in the omasum.
46. High dietary intake of calcium decreases intestinal absorption of iodine.
47. Anaemia occurs in the later stage of primary copper deficiency.
48. Lactation tetany of mares is caused by hypocalcemia.
49. Inability to see in dim light is due to Vitamin A deficiency.

50. Ceruloplasmin is the copper containing enzyme through which copper exerts its physiological function.
51. The common method of mischievous killing of an animal is poisoning.
52. Mischief is punishable under section 377 I.P.C.
53. Rigor mortis commences at the head and neck, extending backward to the body and limbs.
54. The adulteration of milk and milk products is punishable under section 272 I.P.C.
55. Shooting is the most humane and the most rapid method of euthanasia.
56. In ultrasonography, the term anechoic denotes decreased echogenecity.
57. Oral ulcers, vomiting and anemia may be associated with renal failure in dogs.
58. Isotonic concentration of dextrose is 5.0%.
59. Parasympathetic stimulants are contraindicated in late pregnancy.
60. In hepatic disorders, the protein content of the diet should be of high biological value.
61. In cerebellar diseases, the rate, range and direction of movement is affected.
62. Positive venous test is noticed in congestive heart failure.
63. Cheyne-stokes respiration is associated with advanced renal and cardiac diseases.
64. Oral administration of diazepam is best avoided in the management of canine epilepsy.
65. Eclampsia in bitches is a hypocalcaemic syndrome.
66. Curled toe paralysis in birds is associated with the deficiency of Vitamin B_2.
67. Administration of Vitamin K is useful in the management of sweet clover poisoning.
68. Se and Vit. E deficiencies are interrelated.
69. In cattle, fatty infiltration of liver is otherwise called as pregnancy toxemia.
70. Nervous signs may be associated with bovine ketosis.
71. Rickets is a disease of young animals.
72. Zinc deficiency can result in parakeratosis in pigs.
73. Unilateral truncal alopecia is a common dermatological abnormality associated with canine hypothyroidism.
74. In most states of the country, the minimum standards of veterinary education for granting a recognized veterinary degree is governed by ICAR Act, 1984.
75. Determination of iodine value is of use in detecting adulteration of meat.
76. In India, dogs cannot be insured.
77. Antidote for carbamate poisoning is atropine.
78. The Dourine Act allows for breeding of affected animals.
79. Muscle spasms followed by stiffness is associated with strychnine poisoning.
80. Rumen micro organisms utilize dietary cobalt to synthesis Vit.B12.
81. Parturient paresis is rare in sows.
82. Selenium will enhance the resistances of the bovine mammary gland to infectious agents.
83. The feeding of high calcium diets before calving is contraindicated and may increase the incidence of milk fever.
84. The prognosis is good for Downer which are still recumbent after 7 days.
85. Vitamin A is not essential for the regeneration of the visual purple necessary for dim light vision.
86. Volatile fatty acid levels in blood and rumen are much higher in normal cows than in ketotic cows.
87. In transit tetany mares sweat profusely and have difficulty in moving because of tetany of the limbs and in co-ordination.
88. The liver is a common store for copper, iron, Vitamin A and B12.

89. Nutritional muscular dystrophy occurs in young rapidly growing calves, lambs and foals.
90. The biochemical role of selenium is as a component of the enzyme glutathione peroxidase.
91. Soundless bellowing and yawning are commonly seen in rabid cattle.
92. In the normal pH of rumen fluid Gram positive bacteria is dominant.
93. Ilcus is a state of functional obstruction of the intestines or failure of peristalsis.
94. In hepatitis, the onset of the disease is slower and less acute than in cirrhosis.
95. Polyphagia is difficulty in prehending or swallowing food.
96. Regurgitation is a hall mark of gastritis in dogs.
97. Hematochezia denotes fresh blood on the faeces.
98. Hypothermia occurs in shock, circulatory collapse and just before death in most diseases.
99. Oliguria occurs in terminal stages of all forms of nephritis.
100. Prolapse of the third eye lid is characteristic sign of tetanus in horses.
101. The object of the post-mortem examination is to ascertain the time since death and the cause of the death.
102. Mutton is generally paler than goat meat.
103. Death of an individual animal is called molecular death and the death of the tissue is called somatic death.
104. Mischief is punishable under Section 428 and 429 IPC.
105. Ghee is generally adulterated with vegetable oils or hydrogenerated oils.
106. In suspected cases of cyanide poisoning, the stomach content and liver specimen should be sent for chemical analysis.
107. Isotonic concentration of sodium bicarbonate is 2.6%.
108. Fluoroquinolones can cross the blood brain barrier even without inflammation.
109. Murmurs are always associated with organic heart disease.
110. Physiological pH of rumen fluid varies between 4.0 to 7.0.
111. Diurnal variation of temperature is characterized by a decline of temperature in the evening.
112. A complete absence of lung sounds is noticed associated with space occupying masses of thorax.
113. Estimation of alanine aminotransferase is a reliable indicator of hepatic damage in dogs.
114. One of the common causes of acral lick dermatitis in dogs is boredom.
115. Ringers lactate is the fluid of choice for gastritis in dogs.
116. Pollakiuria and stranguria are clinical findings commonly associated with lower urinary tract diseases.
117. Pica in farm animals could be associated with sodium deficiency.
118. Sulkowitch test is used to detect calcium level in urine.
119. Estimation of methyl malonic acid can be used to diagnose zinc deficiency.
120. Milk fever is relatively common in heifers.
121. Ceruloplasmin estimation can be used to diagnose copper deficiency in sheep.
122. Cows that are unable to rise after 24 hours of recumbency and after two treatments for parturient paresis can be classified as downers.
123. Serum inorganic phosphorous level is a good indicator of phosphorous deficiency.
124. 'Woody appearance' is seen commonly in nervous form of ketosis.
125. In new born farm animals, infection from the umbilicus can result in extension and localization of infection in the joints.

126. The appearance of permanent incisors at various ages in the upper jaw of cattle can be used to determine the age.
127. Hair is a useful material to detect chronic arsenic poisoning.
128. In India, cats cannot be insured.
129. A person accused of beating or kicking or subjecting an animal to unnecessary pain can be tried under the prevention of cruelty to animals act of 1890.
130. Presence of bone spavin can diminish the natural usefulness of an animal making it unsound.
131. In cattle, standing reticular radiography is a useful aid for diagnosis of TRP.
132. A moldy rottling odor of rumen fluid indicates protein putrefaction.
133. The presence of plugs of mucus in the rectum is suggestive of a functional obstruction.
134. Rapid changes in barometric pressure may affect voluntary intake of cattle.
135. Bloat is not a common cause of sudden death in animals.
136. A slow rising pulse is characteristic of stenosis of aortic semilunar valves.
137. Sudden death or sudden onset of acute heart failure can result from rupture of components of heart valves.
138. Rapid shallow respiration is the cardinal sign in early pneumonia.
139. Vomiting in horses is usually followed by aspiration.
140. Hydrothorax is usually accompanied by fever and toxemia.
141. An intravenous injection of frusemide produces urination in most animals in about 20 minutes.
142. Tetany associated with depression of serum magnesium level is a common occurrence in ruminants.
143. Hypomagnesemia is a problem of grass dominant pustures.
144. There is a direct relationship between protein intake and the concentration of blood urea nitrogen.
145. The most important aspect of treatment of downer cow is to provide most comfortable bedding.
146. A deficiency of protein commonly accompanies a deficiency of energy.
147. Continued blood loss may result in iron deficiency.
148. Estimation of levels of whole blood glutathione peroxidase activity is not a reliable index for monitoring selenium status of cattle.
149. Lacerated wound is also called as penetrating wound.
150. Examination of blood stains is not of great importance for vetero-legal purposes.
151. Freshness of milk is determined by finding out the acidity of milk.
152. The meat of horse contain more glycogen than the meat of other species.
153. A vetero-legal postmortem examination should be done by written order from the police officer or executive magistrate.
154. Haemorrhage is one of the common causes of shock in animals.
155. Death in oesophageal obstruction is only due to dehydration.
156. In left abomasal displacement, ketonuria may be appreciated but blood glucose level remains within normal range.
157. Salivary mucoproteins have antifoaming activity.
158. In ECG, S wave in the form of S1, S2, S3 indicates right ventricular hypertrophy.
159. Pole test is employed to diagnose cases of TRP.
160. L shaped abdomen in a cow indicates vagus indigestion.
161. Elasticity and vital capacity of the lung is reduced in pulmonary edema.
162. Clinical signs associated with IV disk extrusion in the cervical spine usually are more severe.

163. Acute renal failure is decline in renal function that occurs over period of years.
164. Hyperparathyroidism can be associated with chronic renal failure.
165. Triglyceride challenge test is employed to diagnose cases of exocrine pancreatic insufficiency.
166. P wave in ECG represents ventricular depolarization.
167. Specific dietary deficiency of calcium and phosphorous may also lead to a high incidence of ketosis.
168. Vitamin E deficiency in swine can lead to anaemia.
169. Cracking of soles and tops of hooves are recorded in swine due to biotin deficiency.
170. Feeding magnesium or calcium sulphate, ammomum chlorides for four weeks before calving not only reduces incidence milk fever, but also increases milk production and reproductive efficiency.
171. Hypophosphatemia depresses glycolysis and lowers concentration of ATP in bovine erythrocytes resulting in hemolysis.
172. The term downer cow refers to animals remaining recumbent for 12 hours after parturition.
173. Pregnancy toxaemia of sheep is best described as a disease of pregnant ewes with multiple foetuses.
174. Magnesium does not interfere with calcium absorption.
175. Copper is a trace mineral but iron is a macromineral.
176. In poultry, biotin deficiency can lead to poor feathering.
177. In poultry, Vitamin C is employed in cases of heat stress as well as to improve antibody response following vaccination.
178. Transient recumbency is a disease which occurs after prolonged transport, usually in cows and ewes in late pregnancy.
179. Nasal discharge with a rust or prune juice color indicates blood originating from the pharynx.
180. The viscosity of ruminal fluid is markedly decreased due to production of soluble slime by bacteria which proliferate in high carbohydrate diet.
181. Endotoxins are normally present in the intestine.
182. Reticular magnets are administered to prevent Vagal indigestion.
183. Interleukin-1 initiates fever by inducing an abrupt increase in the synthesis of prostaglandin.
184. Shivering thermo genesis is a response to sudden exposure to cold.
185. CRT is less than 2 seconds in shock.
186. In diffuse peritonitis the fibrinogen levels may be increased up to 10-20 g/L.
187. In cows near parturition, an apparent rectal paralysis leading to constipation may occur.
188. Damage to fourth cranial nerve results in dorsolateral fixation of the eye ball.
189. Cor pulmonale is a syndrome of right heart failure.
190. Immune system plays a major role in the pathogenesis of pyelonephritis.
191. Decrease in the number of osteoblasts with increasing age could delay the ability of bone to contribute calcium to plasma pool.
192. Oral dosing of amino glycosides may cause a syndrome similar to milk fever.
193. Alpha hydroxyvitamin D given at 200 microgram daily PO to cows reduces the development of milk fever.
194. There is positive feedback regulatory mechanism to control concentrations of magnesium in ruminants.
195. Low urine magnesium level is good presumptive evidence of hypomagnesemia.

196. A low Insulin: glucagon ratio stimulates lipolysis in adipose tissue and ketogenesis in liver.
197. Neonatal hypoglycemia in piglets occurs primarily during the first 2 weeks after birth.
198. The most common cause of iodine deficiency in farm animals is the failure to provide iodine in diet.
199. Calcium carbonate added to the diet of weaned and finishing pigs may cause iron deficiency.
200. Kangaroo sitting posture is noticed in hypobiotinosis.
201. Vitamin A is necessary to maintain normal activity of osteoblasts and osteoclasts.

KEY ANSWERS

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
T	T	F	F	T	T	T	F	F	F	F	F	F	F	T
16	17	18	19	20	21	22	23	24	25	26	27	28	29	30
T	F	T	F	T	F	T	T	T	T	T	T	T	T	T
31	32	33	34	35	36	37	38	39	40	41	42	43	44	45
F	T	T	F	T	T	F	F	F	F	T	T	F	T	F
46	47	48	49	50	51	52	53	54	55	56	57	58	59	60
T	T	T	T	T	T	F	T	T	T	F	T	T	T	T
61	62	63	64	65	66	67	68	69	70	71	72	73	74	75
T	T	T	T	T	T	T	T	T	T	T	T	F	F	T
76	77	78	79	80	81	82	83	84	85	86	87	88	89	90
T	T	F	T	T	T	T	T	F	F	F	T	T	T	T
91	92	93	94	95	96	97	98	99	100	101	102	103	104	105
T	F	T	F	F	F	T	T	T	T	T	F	F	T	T
106	107	108	109	110	111	112	113	114	115	116	117	118	119	120
T	F	T	T	F	F	T	T	T	F	T	T	T	F	F
121	122	123	124	125	126	127	128	129	130	131	132	133	134	135
T	T	F	F	T	T	T	T	F	T	T	T	T	T	F
136	137	138	139	140	141	142	143	144	145	146	147	148	149	150
T	T	T	T	F	T	T	T	T	T	T	T	F	F	F
151	152	153	154	155	156	157	158	159	160	161	162	163	164	165
T	T	T	T	F	T	T	T	T	T	T	F	F	T	T
166	167	168	169	170	171	172	173	174	175	176	177	178	179	180
F	T	F	T	T	T	F	T	F	F	T	T	T	F	F
181	182	183	184	185	186	187	188	189	190	191	192	193	194	195
T	F	T	T	F	T	T	T	T	F	T	T	F	F	T
196	197	198	199	200	201									
T	F	T	T	T	T									

IV. Match the following:

I

1. Copper	a. Cheilosis
2. Vitamin A	b. Nutritional Haemoglobinuria
3. Zinc	c. Megaloblastic anaemia
4. Iodine	d. Enzootic ataxia
5. Vitamin K	e. Black tongue
6. Vitamin D	f. Nyctalopia
7. Phosphorus	g. Parakeratosis
8. Thiamine	h. White muscle disease
9. Tocopherol	i. Goitre
10. Niacin	j. Polioencephalomalacia
11. Riboflavin	k. Osteomalacia
12. Cyanocobalamin	l. Bleeding diathesis

Ans: 1. d 2. f 3. g 4. i 5. l 6. k
7. b 8. j 9. h 10. e 11. a 12. c

II

1. Marsh test	a. Identification of lead poisoning
2. Millons test	b. Identification of arsenic poisoning
3. Florence test	c. Identification of phenol/carbolic acid poisoning
4. Potassium iodide test	d. Identification of bestiality

Ans: 1. b 2. c 3. d 4. a

CHAPTER 17
EPIDEMIOLOGY AND PREVENTIVE VETERINARY MEDICINE

I. Multiple Choice questions:

1. The best method for the control of summer mastitis.
   a) Teat dipping
   b) Dry cow therapy
   c) Hygeine
   d) Culling of masitic animals

2. Stormont test is used for the screening of
   a) Johne's disease
   b) Brucellosis
   c) Tuberculosis
   d) None of the above

3. The strain *Brucella abortus* used for the preparation of live vaccine.
   a) Strain 99
   b) Strain45/20
   c) Strain RB 51
   d) None of the above

4. One anthelmintic which can be administered both by orally and parenteraly
   a) Piperazine
   b) Ivermectin
   c) Pyrantal pamoate
   d) Albendazole

5. *Coccivac* is a vaccine against Coccidiosis containing
   a) Attenuated sporulated oocyst
   b) Attenuated non-sporualted oocyst
   c) Attenuated sporozoit
   d) Killed sporozoit

6. The cheap and best disinfectant for FMD virus
   a) Lysol
   b) Pottasisum permanganate
   c) Sodium carbonate
   d) Chlorhexidine

7. The protective rabies antibody titre
   a) 1 IU/ml
   b) 2.5 IU/ml
   c) 0.5 IU/ml
   d) 5.0 IU/ml

8. Enzootic cerebral nematodiasis is caused by
   a) *Setaria digitata*
   b) *Dirofilaria repens*
   c) *Dirofilaria immitis*
   d) *Stephanurus dentatus*

9. The dose of Buparvaquone in the treatment of Theileriosis
   a) 2.5 g/kg B.W.
   b) 0.25 mg/kg B.W.
   c) 2.5 mg/kg B.W.
   d) 25 mg/kg B.W.

10. Most common cause of bovine mycotic abortion is
    a) *Candida albicans*
    b) *Aspergillus fumigatus*
    c) *Aspergillus niger*
    d) Rhizopus spp.

11. The causative agent of tropical canine pan-cytopaenia
    a) *Ehrlichia platys*
    b) *Ehrlichia canis*
    c) *Ehrlichia sennetsu*
    d) *Ehrlichia risticii*

12. The main reservoir host of pseudorabies virus is
a) Cattle
b) Pigs
c) Dogs
d) Cats

13. Entero-epithelial cycle of *Toxoplasma gondii* occurs in
a) Birds
b) Dogs
c) Cats
d) All the above

14. Ulcerative enteritis is caused by
a) *Clostridium colinum*
b) *Corynebacterium perdicum*
c) *Erysipelothrix rhusiopathiae*
d) None of the above

15. Animal vaccinated with anthrax spore vaccine should be withheld from slaughter for
a) 7 days
b) 30 days
c) 45 days
d) 60 days

16. Greenish – bronze sheen of liver and spleen is a pathognomonic lesion in
a) Fowl typhoid
b) Fowl cholera
c) Fowl plague
d) Pullorum disease

17. An experimental animal of choice for diagnosis of glanders
a) Rabbits
b) Mice
c) Hamster
d) Guinea pig

18. White side test for mastitis is based on increase in
a) pH
b) Chloride
c) Leukocyte count
d) Catalase

19. Vegetative endocarditis is a pathognomonic lesion in
a) Swine fever
b) Swine erysipelas
c) Swine influenza
d) FMD

20. Dose of Griseofulvin for dogs
a) 5 mg/kg bw
b) 10 mg/kg bw
c) 25 mg/kg bw
d) 0.5 mg/kg bw

21. Serum titre which is taken as positive for cattle in standard tube agglutination test for Brucellosis
a) 40 IU/ml
b) 80 IU/ml
c)160 IU/ml
d). 20 IU/ml

22. One viral agent which require actively dividing cells for its multiplication.
a) Canine distemper virus
b) Canine parvovirus
c) Canine corona virus
d) Rabies virus

23. The strain of Foot and Mouth disease virus which is not included in the present day vaccine in India
a) Asia-1
b) O
c) A
d) None of the above

24. *Peste des petits ruminants* virus causes the disease mainly in
a) Cattle b) Buffalo
c) Sheep d) Goat

25. The main mode of FMD virus transmission is
a) Inhalation b) Ingestion
c) Contact d) Transplacental

26. The classical swine fever virus has got affinity towards
a) Lymphoid tissue b) Endothelial cells
c) Reticulo endothelial cells d) All the above

27. The most common form of canine parvo viral infections in neonates is
a) Cardiac form b) Gastrointestinal form
c) Generalized form d) All the above

28. The toxic factor in the capsule of *Bacillus anthracis*
a) Poly-D-Glutamic acid b) Edema factor
c) Protective antigen d) None of the above

29. The immune reaction during booster vaccination
a) Antigen presentation b) Recruitment of phagocytic cells
c) Anamnestic reaction d) None of the above

30. The death in Leptospirosis is due to.
a) Renal failure b) Lung collapse
c) Multiorgan failure d) Heart failure

31. The protein of rabies virus which induces neutralizing antibody
a) Glycoprotein-G b) M protein
c) L protein d) N protein

32. Silage feeding is associated with the following disease
a) Leptospirosis b) Listeriosis
c) Salmonellosis d) Colibacillosis

33. Route of inoculation of tuberculous mastitis
a) Inhalation b) Ingestion
c) Hematogenous d) None of the above

34. California mastitis test detects
a) Change in leukocyte b) Change in pH
c) Change in leukocyte and pH d) Change in erythrocyte

35. The test which detects toxoplasmosis
a) Sabin-Feldman dye test b) Ascoli's precipitation test
c) White side test d) Coggin test

60. The infective stage of Babesia injected by ticks
a) Sporozoite
b) Merozoite
c) Sporocyst
d) Piroplasm

61. Canine ehrlichiosisis diagnosed by demonstration of
a) Morula in monocytes
b) Morula in erythrocyte
c) Free morula in plasma
d) Morula in platelets

62. Rabies is classified under list by OIE
a) Multiple host disease
b) Bovine disease
c) Sheep and goat disease
d) All the above

63. First step in disease investigation
a) Analytical epidemiology
b) Horizontal epidemiology
c) Descriptive epidemiology
d) Predictive epidemiology

64. _____ per cent of chlorine is available in bleaching powder
a) 2
b) 5
c) 40
d) 33

65. Time between infection and availability of an infectious agent in an arthropod vector is
a) Incubation period
b) Prepatent period
c) Extrinsic incubation period
d) Generation time

66. _____ is the stage of an epidemic curve where maximum number of cases is seen
a) Period of accrescence
b) Period of decrescence
c) Culmination point
d) None of the above

67. _____ ecosystem is created by man
a) Autochthonous
b) Anthropurgic
c) Synanthropic
d) None of the above

68. Pig is an _____ host for FMD virus
a) Amplifier
b) Incidental
c) Reservoir
d) Natural

69. _____ is characterized by continuous high temperature and abundant moisture
a) Megatherm
b) Xerophytes
c) Tundra
d) Microtherm

70. When a host excretes infectious agents before onset of clinical signs, it is named as
a) Incubatory
b) Convalescent
c) Reservoir host
d) None of the above

71. Elimination of a disease from an area is called
a) Control
b) Eradication
c) Prevention
d) None of the above

72. Collection of living organisms in a biotope is called
a) Biotic community
b) Nidi
c) Both a & b
d) None of the above

73. The postulate regarding the causation of disease which ignores the multiple factors as etiology of disease
a) Koch's postulate
b) Evan's postulate
c) John Stuarts cannons
d) All the above

74. The focus of infection in environment is
a) Nidus
b) Biome
c) Nosoarea
d) None of the above

75. When a disease occurs in a predictable regularity, it is said to be
a) Sporadic
b) Endemic
c) Pandemic
d) All the above

76. The scientist who developed the method of data collection and reduction
a) John Snow
b) Leeuenhoek
c) John Graunt
d) Louis Pasteur

77. Transmission of disease through milk is considered as
a) Horizontal
b) Vertical
c) Oral transmission
d) All the above

78. In a population of 25 animals, 15 manifest signs of a disease and 5 of them die, the mortality and case fatality rates respectively are
a) 20per cent & 5per cent
b) 20per cent & 33 1/3 per cent
c) 33 1/3 per cent & 5 per cent
d) 5per cent & 20 per cent

79. Disease induced by doctors
a) Congenital
b) Iatrogenic
c) Infestation
d) None of the above

80. The head quarters of OIE is located at
a) London
b) Paris
c) New York
d) Geneva

81. Screening test is mainly used
a) To diagnose an acute case
b) To diagnose a chronic case
c) To diagnose a subclinical case
d) None of the above

82. Theory of multifactorial causation of diseases was first proposed by
a) Louis Pasteur
b) Robert Koch
c) Peten Kofer
d) Evans

83. Outbreaks in avian population are called
a) Epidemics
b) Epornitics
c) Epizootics
d) Epiavics

84. Type of epidemiological investigation involves observing and recording diseases and possible causal factors
a) Descriptive epidemiology
b) Analytical epidemiology
c) Experimental epidemiology
d) Theoretical epidemiology

85. Type of epidemiological investigation involves analysis of observations using suitable diagnostic and statistical tests
a) Descriptive epidemiology
b) Analytical epidemiology
c) Experimental epidemiology
d) Theoretical epidemiology

86. Type of epidemiological investigation in which epidemiologist observes and analyse data from groups of animals from which he can select, and in which he can alter, the factors associated with the groups
a) Descriptive epidemiology
b) Analytical epidemiology
c) Experimental epidemiology
d) Theoretical epidemiology

87. Type of epidemiological investigation consists of the representation of disease using mathematical models that attempt to simulate natural patterns of disease occurrence
a) Descriptive epidemiology
b) Analytical epidemiology
c) Experimental epidemiology
d) Theoretical epidemiology

88. Recording of events occurring in a particular point of time
a) Prospective survey
b) Retrospective survey
c) Cross sectional survey
d) Longitudinal survey

89. Making of routine observations on health, productivity and environmental factors and the recording and transmission of these observations are called
a) Monitoring
b) Surveillance
c) Survey
d) Screening

90. Which among following is an observational study?
a) Cross-sectional studies
b) Case-control studies
c) Cohort studies
d) All the above

91. Number of new cases that occur in a known population over a specified period of time
a) Prevalence
b) Incidence
c) Attack rate
d) Risk

92. A host in which organism undergoes its sexual phase of reproduction
a) Primary host
b) Definitive host
c) Final host
d) Reservoir host

93. Destruction of all micro organisms, vegetative as well as spores
a) Disinfection
b) Antisepsis
c) Sterilization
d) Decontamination

94. Shoe leather epidemiology is
a) Participatory epidemiology
b) Field epidemiology
c) Experimental epidemiology
d) Theoretical epidemiology

95. Occurrence of a disease to a level in excess of the expected level
a) Endemic occurrence
b) Pandemic occurrence
c) Epidemic occurrence
d) Sporadic occurrence

96. The likelihood of a positive test result in patients known to have the disease is
a) Positive Predictive value
b) Negative predictive value
c) Sensitivity
d) Specificity

97. Likelihood of a negative test result in individual known to be free of disease
a) Sensitivity
b) Specificity
c) Positive Predictive value
d) Negative predictive value

98. A disease that occurs with predictable regularity in a population unit with only relatively minor fluctuations in its frequency
a) Epidemic
b) Endemic
c) Sporadic
d) Subclinical

99. The period of time between infection of the vertebrate host and delectability of an agent in secretions, excretions, blood or tissues
a) Incubation period
b) Prepatent period
c) Pre pathogenic period
d) Subclinical period

100. Vertical transmission occurs
a) Transovarially
b) In utero
c) Trans colostrum
d) All the above

101. Identification of undiagnosed cases of disease using rapid tests or examinations
a) Monitoring
b) Surveillance
c) Screening
d) Modelling

102. (1 – Relative Risk) X 100 is
a) Attributable risk
b) Attack rate
c) Secondary attack rate
d) Vaccine efficacy

103. Which among the following is not a measure of production
a) Calf crop
b) Hen month production
c) Pregnancy rate
d) None of the above

104. Rate of calves dying within 4 weeks of birth to the number of live calves born is called
a) Calf mortality rate
b) Neonatal mortality rate
c) Age specific death rate
d) Crude death rate

105. Probability of disease in an animal with positive result in a particular diagnostic test is called
a) Sensitivity
b) Specificity
c) Positive predictive value
d) Negative predictive value

106. Agent, Host and Environment forms the
a) Web of disease causation
b) Epidemiological factors
c) Multifactorial disease causation
d) Epidemiological triad

107. A common preservative used for transportation of specimens suspected for virus infection.
a) Normal Saline
b) EDTA
c) Rectified Spirit
d) Glycerol saline

108. Important site for collection of blood in rabbits
a) Jugular vein
b) Caudal vein
c) Cardiac puncture
d) Saphenous vein

109. Experimental animal used for diagnosis of Glanders.
a) Rabbit
b) Guinea Pig
c) Mice
d) Hamster

110. The titre of serum considered as brucella positive for cattle in STAT.
a) 1 in 80
b) 1 in 40
c) 1 in 160
d) 1 in 320

111. Corneal impression smear examination is a diagnostic tool for which disease
a) Foot and Mouth Disease
b) New Castle Disease
c) Canine Distemper
d) Canine Parvo Viral infection

112. The disease in which MAT is commonly employed for diagnosis
a) Brucellosis
b) Leptospirosis
c) Listeriosis
d) Anthrax

113. Screening test employed for diagnosis of brucella infection in a herd
a) AGID
b) ELISA
c) STAT
d) MRT

114. Common agar medium used for antibiotic sensitivity test
a) Mueller Hinton Agar
b) Potato Infusion Agar
c) Triple Sugar Iron Agar
d) Brain Heart Infusion Agar

115. A qualitative form of ELISA used for diagnosis of infectious diseases under field conditions
a) Avidin Biotin ELISA
b) Sandwich ELISA
c) Dot ELISA
d) Indirect ELISA

116. Ideal clinical sample to be collected for conducting Ascolis test for diagnosis of Anthrax
a) Blood
b) Spleen
c) Muzzle piece
d) Muscle

117. Allergic test is employed for diagnosis of
a) Tuberculosis
b) Johne,s Disease
c) Glanders
d) All the above

118. The intra cytoplasmic inclusion bodies found in Fowl pox
a) Koch's blue bodies
b) Bollinger bodies
c) Langhans cells
d) Sulphur granules

119. Method of administration of Fowl pox vaccine
a) Subcutaneous
b) Intra muscular
c) Oculo nasal
d) Pin prick method

120. Dose and route of administration of Raksha O Vac in pigs
a) 2ml subcutaneous
b) 2 ml intramuscular
c) 1 ml intramuscular
d) 1 ml subcutaneous

121. Precipitation test used for diagnosis of anthrax
a) Ascolis test
b) RBPT
c) Mc Faydean reaction
d) Gel precipitation test

122. Staining technique used for detection of Cryptococcal organisms
a) Ziehl Nelson's staining
b) LCB staining
c) Claudius staining
d) Broadhurst Palley staining

123. Potency required for a rabies vaccine to be used for post exposure anti rabies vaccination
a) 2.25 iu/ dose
b) 2.5 iu/ dose
c) 1.0 iu/ dose
d) 1.5 iu/ dose

124. Rectal pinch smear is used for diagnosis of
a) Tuberculosis
b) Paratuberculosis
c) Rinderpest
d) Colibacillosis

125. Major toxin produced by *Clostridium perfringens* type D
a) Alpha toxin
b) Beta toxin
c) Delta toxin
d) Epsilon toxin

126. Organism causing Actinomycosis in human beings
a) *A. bovis*
b) *A. israeli*
c) *A. hominis*
d) *A. ligniersii*

127. OIE recommended test for diagnosis of Rabies
a) Negri bodies detection
b) Mouse inoculation
c) FAT
d) ELISA

128. Pathognomonic lesion of Pasteurellosis in rabbits
a) Spleenic enlargement
b) Tiger heart
c) Haemorrhagic tracheitis
d) Zebra stripes of intestine

129. *Brucella abortus* strain used for preparation of diagnostic antigens
a) Strain 19 b) Strain 99
c) Strain RB 51 d) Strain 45/20

130. Breed of sheep highly susceptible to sheep pox
a) Suffolk b) Dorset
c) Merino d) Alpine

131. Drug used for treatment of Tuberculosis
a) Rifampicin b) Isoniazid
c) Ethambutol d) All the above

132. A parasitic disease which can be diagnosed by wet film examination
a) Trypanosomosis b) Theileriosis
c) Onchocercosis d) Anaplasmosis

133. A parasitic disease which can be diagnosed using buffy coat smear
a) Trypanosomosis b) Theileriosis
c) Ehrlichiosis d) All the above

134. Name one ectendo parasiticide
a) Morantel b) Closantel
c) Pyrantel d) Diminazine

135. The drug used as adulticide in dirofilariasis
a) Ivermectin b) Diethyl carbamazine citrate
c) Milbemycin oxime d) Doramectin

136. The dose and route of tartar emetic used for treatment of Schistosomiasis
a) 2.5 mg/ kg subcutaneously b) 3 mg/ kg intra muscularly
c) 5 mg/ kg intravenously d) 0.5mg/ kg intravenously

137. Knott's technique is used for diagnosis of
a) Trypanosomosis b) Microfilarosis
c) Hydatidosis d) Trichomoniasis

138. Parasite causing itchy leg in cattle
a) Sarcoptes b) Psoroptes
c) Choreoptes d) Demodex

139. Infective stage of amphistome in cattle
a) Metacercaria b) Cercaria
c) Sporocyst d) Redia

140. Causative agent of depluming itch in poultry
a) *Cnemodocoptes gallinae* b) *Cnemidocoptes mutans*
c) *Dermanyssus gallinae* d) *Menopon gallinae*

141. Agent responsible for winter coccidiosis
a) *E. tenella* b) *E. necatrix*
c) *E. acervulina* d) *E. zurnii*

142. Intermediate stage of *Taenia hydatigena*
a) Cysticercus bovis b) Cysticercus cellulosae
c) Cysticercus tenuicollis d) Coenurous cerebralis

143. Prediliction site of *S.spindale*
a) Nasal vein b) Portal vein
c) Jugular vein d) Milk vein

144. Parasite causing milky spot appearance of liver
a) *T. vitullorum* b) *A. galli*
c) *A.suum* d) *T. canis*

145. Intermediate host for *Moneizia expansa*
a) Indoplanorbis b) Ctenocephalus
c) Oribatid mite d) Tabanus

146. Barber's pole worm is
a) *Heterakis gallinae* b) *Haemonchus contortus*
c) *Trichstrongylus axei* d) *Trichuris vulpis*

147. Parasite causing biliary amphistomosis
a) *Gigantocotyl explanatum* b) *Paramphistomum cervi*
c) *Cotylophoron cotylophorum* d) *Gastrodiscus secundus*

148. Red mite of poultry
a) *Cnemidocoptes gallinae* b) *Cnemidocoptes mutans*
c) *Dermanyssus gallinae* d) *Menopon gallinae*

149. Type of anemia produced in *Diphyllobothrium latum* infection
a) Macrocytic hypochromic b) Microcytic hypochromic
c) Microcytic normochromic d) Macrocytic normochromic

150. Diagnostic test employed for the diagnosis of hydatidosis
a) Hotis test b) Ascolis test
c) Casoni's test d) Widal test

151. Fringed tape worm
a) *Moneizia expansa* b) *Dipylidium caninum*
c) *Echinococcus granulosus* d) *Thysanosoma actinoides*

152. Lung worm seen in horses
a) *Dictyocaulus viviparus* b) *Dictyocaulus filaria*
c) *Dictyocaulus arnsfield* d) *Metastrostrongylus apri*

153. Palanquin shaped ova
a) *Schistosoma spindale* b) *Schistosoma nasale*
c) *Schistosoma japonicum* d) *Schstosoma ovis*

154. Gape worm of poultry
a) *Raillietina echinobothria* b) *Davainea proglottina*
c) *Ascaridia galli* d) *Syngamus trachea*

155. Measly pork
a) *T. saginata* b) *T. solium*
c) *T. hydatigena* d) *T. Taeniformis*

156. Clay pipe stem liver
a) Fasciolosis b) Amphistomosis
c) Toxocarosis d) Coccidiosis

157. The status of cattle plague in India
a) Eradicated b) Controlled
c) Prevented d) None of the above

158. World zoonoses day is celebrated on
a) 26th January b) 6th July
c) 8th September d) 13th March

159. The recent flu outbreak in Mexico and other countries were transmitted by
a) Direct contact with pigs b) Eating pork
c) Directly from human to human d) None of the above

160. The influenza virus is mainly classified into A,B & C based on
a) Nucleo protein b) Matrix protein
c) Both nucleo and matrix protein d) Glycoprotein

161. One viral agent which causes neonatal pup mortality
a) Canine distemper virus b) Canine parvovirus
c) Canine corona virus d) Rabies virus

162. The best drug for the treatment of cryptosporidiosis
a) Sulphadimidine b) Azithromycin
c) Enrofloxacine d) Chloramphenicol

163. Parenterally administered iron preparation
a) Iron dextran b) Ferrous sulphate
c) Ferrous fumarate d) All the above

164. The main mode of swine influenza virus transmission is
a) Inhalation b) Ingestion
c) Contact d) Transplacental

165. The classical swine fever virus has got affinity towards
a) Lymphoid tissue
b) Endothelial cells
c) Reticulo endothelial cells
d) All the above

166. The most common form of canine parvo viral infections in neonates is
a) Cardiac form
b) Gastrointestinal form
c) Generalized form
d) All the above

167. The principle virulence factors of *Bacillus anthracis*.
a) Poly-D-Glutamic acid
b) Edema factor
c) Protective antigen
d) All the above

168. The immune reaction during booster vaccination.
a) Antigen presentation
b) Recruitment of phagocytic cells
c) Anamnestic reaction
d) None of the above

169. The death in Leptospirosis is due to
a) Renal failure
b) Lung collapse
c) Multiorgan failure
d) Heart failure

170. The protein of rabies virus which induces neutralizing antibody
a) Glycoprotein-G
b) M protein
c) L protein
d) N protein

171. Route of inoculation of leptospiral mastitis
a) Inhalation
b) Ingestion
c) Hematogenous
d) None of the above

172. Whiteside test detects
a) Change in leukocyte
b) Change in pH
c) Change in leukocyte
d) Change in erythrocyte

173. Anthrax spore vaccine contain
a) *Bacillus anthracis* capsulated strain
b) *B. anthracis non-capsulated strain*
c) *B. anthracis* vegetative form
d) None of the above

174. Modified live virus swine fever vaccine induces immunity for
a) 1 year
b) 2 years
c) 3 years
d) 3 months

175. The intermediate host of *Monezia* species
a) Snail
b) Ant
c) Grass hopper
d) None of the above

176. The best molluscicide
a) Miconazole
b) Copper sulphate
c) Bordeaux mixture
d) Griseofulvin

177. One benzimidazole anthelmintics
a) Albendazole
b) Pyrantel pamoate
c) Levamisole hydrochloride
d) Ivermectin

178. One staining method where fixing of the smear is not done
a) Giemsa
b) Acid fast staining
c) Lieshman's staining
d) Gram's staining

179. The type of food which enhances Griseofulvin absorption
a) Carbohydrate
b) Fat
c) Protein
d) Vitamins

180. Diphyllobothriosis result in
a) Pernicious anemia
b) Pot belly & rough coat
c) Diarrhoea
d) Constipation

181. Diarrhoea in amphistomosis is due to
a) Duodenitis due to immature worm
b) Gastritis due to adult parasite
c) Colonitis due to immature worm
d) None of the above

182. Important symptom of ancylostomosis
a) Papery white mucous membrane
b) Tarry coloured feces
c) All the above
d) None of the above

183. Drug for *Rhipicephalus sanguineous*
a) Doramectin
b) Ivermectin
c) Cypermethrin
d) All the above

184. Drug of choice for Theileriosis
a) Dimenazine aceturate
b) Buparvaquone
c) Quinapyramine sulphate
d) None of the above

185. Trypanosomosis transmitted by anterior station development.
a) *Trypanosoma brucei*
b) *T.cruzi*
c) *T.evansi*
d) *T.equiperdum*

186. Drug used for curative treatment of surra.
a) Quinapyramine sulphate
b) Quinapyramine chloride
c) Oxytetracycline
d) Buparvaquone

187. The infective stage of Babesia injected by ticks
a) Sporozoite
b) Merozoite
c) Sporocyst
d) Piroplasm

188. Canine ehrlichiosisis diagnosed by demonstration of
a) Morula in monocytes
b) Morula in erythrocyte
c) Free morula in plasma
d) Morula in platelets

189. Rabies is classified under List
a) Cattle diseases
b) Multiple species disease
c) Caprine diseases
d) All the above

190. First step in disease investigation
a) Analytical epidemiology
b) Horizontal epidemiology
c) Descriptive epidemiology
d) Predictive epidemiology

191. Reduction in number of cases from an area is called
a) Control
b) Eradication
c) Prevention
d) None of the above

192. The focus of infection in environment is
a) Nidus
b) Biome
c) Nosoarea
d) None of the above

193. When a disease occurs in a haphazard manner, it is said to be
a) Sporadic
b) Endemic
c) Pandemic
d) All the above

194. The scientist who developed the method of data collection and reduction
a) John Snow
b) Leewenhock
c) John Graunt
d) Louis Pasteur

195. Transmission of disease through milk is considered as
a) Horizontal
b) Vertical
c) Oral transmission
d) All the above

196. An area where a disease is present
a) Noso area
b) Nosogeneic territory
c) Disease free zone
d) None of the above

197. Bacillus anthracis is
a) Gram positive
b) Aerobic
c) Endosporeforming rods
d) All the above

198. Spores of *Bacillus anthracis* is formed in
a) Immediately on exposure to air
b) Within one hour
c) Within 6-8 hour
d) None of the above

199. Best disposal method for anthrax carcass
a) Incineration
b) Deep burial
c) Meat cum bone meal reparation
d) All the above

200. Anthrax is primarily a disease of
a) Carnivores
b) Herbivores
c) Omnivores
d) All the above

201. Anthrax infected animals shed---------- form of *Bacillus anthracis.*
a) Vegetative form
b) Spore form
c) Resistant form
d) None of the above

202. Germination of *Bacillus anthracis* depends on
a) pH
b) Temperature
c) Moisture
d) All the above

203. Non industrial anthrax results from
a) Those involved in hide processing
b) Those involved in wool industry
c) Those involved in bone processing
d) Farmers

204. The strain of swine influenza virus which caused recent flu outbreak among human being in Mexico and other countries.
a) H2N2
b) H1N3
c) H1N1
d) H3N2

205. The web site of OIE
a) www.oie.org
b) www.oie.int
c) www.oie@int
d) www.oie.edu.org

206. The web site of WHO
a) www. who. Int
b) www.who.org
c) www.who.edu.org.
d) www.who.info

KEY ANSWERS

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
b	c	c	b	a	c	c	a	c	b	b	b	c	a	c
16	17	18	19	20	21	22	23	24	25	26	27	28	29	30
a	d	c	b	c	b	b	d	d	a	d	c	a	c	c
31	32	33	34	35	36	37	38	39	40	41	42	43	44	45
a	b	c	c	a	b	c	c	a	a	d	b	a	c	c
46	47	48	49	50	51	52	53	54	55	56	57	58	59	60
b	b	a	a	c	b	d	a	a	c	d	b	b	a	a
61	62	63	64	65	66	67	68	69	70	71	72	73	74	75
a	a	c	d	c	c	b	a	a	a	b	a	a	a	b
76	77	78	79	80	81	82	83	84	85	86	87	88	89	90
c	b	b	b	b	c	c	b	a	b	c	d	c	a	d
91	92	93	94	95	96	97	98	99	100	101	102	103	104	105
b	b	c	b	c	c	b	b	b	d	c	d	d	b	c
106	107	108	109	110	111	112	113	114	115	116	117	118	119	120
d	d	c	b	b	c	b	d	a	c	c	d	b	d	b
121	122	123	124	125	126	127	128	129	130	131	132	133	134	135
a	c	b	b	d	b	c	c	b	c	d	a	d	b	b

136	137	138	139	140	141	142	143	144	145	146	147	148	149	150
d	b	c	a	b	d	c	b	c	c	b	a	c	b	c
151	152	153	154	155	156	157	158	159	160	161	162	163	164	165
d	c	b	d	b	a	a	b	c	c	b	b	a	a	d
166	167	168	169	170	171	172	173	174	175	176	177	178	179	180
c	d	c	c	a	c	c	b	a	c	b	a	c	b	a
181	182	183	184	185	186	187	188	189	190	191	192	193	194	195
a	c	d	b	a	a	a	a	b	c	a	a	a	c	b
196	197	198	199	200	201	202	203	204	205	206				
a	d	c	a	b	a	d	d	c	b	a				

II) Fill up the blanks:

1. A sufficient cause virtually always comprises a range of ..... causes; disease therefore is multifactorial.
2. The agent's ability to induce disease is expressed in terms of ..... and is related to the ..... of a host.
3. Robert Koch ignored the influence of ..... factors in the disease production while framing his postulates.
4. The deliberate killing of a minority of infected animals to protect the well majority animals is called .....
5. Choice of laboratory animal for CDV are .....
6. Feline pan leucopenia is most common in ..... about the time of ..... but cats of all ..... are susceptible.
7. In the enteric form of canine parvoviral infection, CPV found in ..... and .....
8. Paired sera samples should be taken at ..... and another at ..... phase of infection.
9. The most common manifestation of actinomycosis in cattle is ..... of the bones of the head, the mandibles and maxilla.
10. Pulpy kidney disease is an enterotoxemia of sheep, goats and cattle caused due to elaboration of epsilon toxin by .....
11. ..... is produced by fetus in case of brucella infection.
12. 'Dragging of the anus' is the common and characteristic condition in canines infected with .....
13. Metacestode stage of Taeneia in pigs causes ..... and in cattle causes .....
14. ..... stages are absent in the life cycle of *Schistosome* sp.
15. Ivermectin at the dose rate of ..... b wt. is commonly recommended for dogs by the manufacturer.
16. The parasite *Gigantocotile explanatum* occurs in the ..... of buffalo and less commonly, cattle .
17. The outbreak of peramphistomiasis occur when the ..... population becomes concentrated around areas of natural water..
18. The most obvious sign in paramphistome infestation is diarrhea accompanied by anorexia and severe .....
19. Miracidium of schistosoma species enters the ..... and produces a cercaria stage.
20. The ..... may act as a transport host for *Ascardia galli*.
21. A factor that affects health of a population is called .....
22. An identified occurrence of disease involving one or more animal is referred as .....

23. An investigation involving collection of information is called .....
24. A focus of infection is called as .....
25. Iatrogenic transmission literally means .....
26. Parvovirus has haemagglutinating property which agglutinates ..... species erythrocytes.
27. Economic loss due to bovine viral diarrhea are .....
28. Overeating disease is a synonym for ..... disease.
29. Coggin's test is done for the following disease .....
30. Synonyms for botulism in poultry are .....
31. Two types of vaccines available against Brucellosis contain ..... strains.
32. Among domestic species of animals ..... is predisposed for Tetanus.
33. Prepatent period of ancylostomiasis ..... days.
34. ..... is the site of predilection of *Trichstrongyle axei* in bovines.
35. An infected calf with ascariasis can release ..... number of larvae in milk.
36. ..... act as intermediate host for Spirocerca lupi infestation.
37. Two types cysts produced in *E. granulosus* infection are ..... among which ..... contains protoscoleces.
38. *Coenurus cerebralis* is caused by ..... species of tapeworm.
39. Anemia caused by *Hemonchus contortus* infestation is .....
40. Syngamus trachea of poultry is called as .....
41. ..... is the drug of choice against Heartworm infection.
42. ..... act as intermediate host for Lungworm infection in pigs.

KEY ANSWERS

1	**Component**	2	**Virulence and pathogenecity; inherent susceptibility**
3	**Environmental**	4	**Test and slaughter policy**
5	**Dogs and ferrets**	6	**Pregnant queen; mid gestation period; age groups**
7	**Payer's patches; mesenteric lymph nodes**	8	**Clinical phase; convalescent**
9	**Rarefying osteomyelitis**	10	***Clostridium perfringes* type D**
11	**Erythritol**	12	***Dipylidium caninum***
13	**Measly pork; measly beef.**	14	**Redia and Cercaria**
15	**200 µg/kg**	16	**Bile ducts and Gall bladder**
17	**Snail**	18	**Anaemia**
19	**Snail**	20	**Earthworm**
21	**Determinant**	22	**Outbreak**
23	**Survey**	24	**Nidus**
25	**By doctor**	26	**Pig, man and monkey**
27	**Mortality ongenital anomaly and carrier status**	28	**Enterotoxaemia**
29	**Equine Infectious anaemia**	30	**Limber neck & bulbar paralysis**
31	**Strain 19 and strain 45/20**	32	**Horse**
33	**21**	34	**Abomasum**
35	**10 million**	36	**Coprophagus beetle**