KARNATAKA VETERINARY, ANIMAL AND FISHERIES SCIENCES UNIVERSITY, BIDAR

ICAR-JRF/SRF EXAMINATION QUESTION BANK

FOR

STUDENTS OF VETERINARY COLLEGE, BIDAR

Budget Provision under

Indian Council of Agricultural Research, New Delhi-

SAU Grant of 2012-13

VETERINARY COLLEGE

Nandinagar, Bidar, Karnataka – 585 226

2013

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2013

PREFACE

Competition has been the part and parcel of today's changing world at all fields and at all levels including the educational field. The students of various academic programmes have to compete at various levels in order to get some job or admission in esteemed institutions. Similar is the case in Veterinary and Animal science education. Persuing post graduation (M.V.Sc) after B.V.Sc & A.H at a good institute is the aim for most of the students. In this context, Indian Council of Agricultural Research, New Delhi conducts All India Competitive Examination for Junior Research Fellowships (JRF) and admission to various post graduate programmes.

However, this examination needs good study materials for preparation. In this context, Veterinary College, Bidar is bringing out "ICAR JRF/SRF Examination Question Bank" for the students of Veterinary College, Bidar. This book is only a supportive material and not a reference material as a whole. Further, the editors would like to give a disclaimer that the materials provided and views expressed are solely of the authors. Neither the editors nor Veterinary College, Bidar takes responsibility for any errors.

The editors are thankful to ICAR, New Delhi for providing financial assistance for preparation of this tutorial question bank. We thank the help and support rendered by Dr. Renuka Prasad, Hon'ble Vice Chancellor, KVAFSU, Bidar in preparing the tutorial question bank. Finally, we thank all the authors who have contributed for the successful preparation of this book.

Sd/-

Dean

30-03-2013 Veterinary College, Bidar

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SYLLABI FOR ICAR'S ALL INDIA ENTRANCE EXAMINATION FOR ADMISSION TO MASTER DEGREE PROGRAMMES AND ICAR-JRF (PGS)

Code 13: MAJOR SUBJECT GROUP - ANIMAL BIOTECHNOLOGY

(**Subjects: 13.1**: Animal Biotechnology, **13.2**: Vety./Animal Biochemistry)

UNIT-I: Structure of prokaryotic and eukaryotic cells, cell wall, membranes, cell organelles, organization and functions, chromosome structure and functions, cell growth division and differentiation. Sub unit structure of macromolecules and supermolecular systems. Self assembly of sub units, viruses, bacteriophage, ribosomes and membrane systems.

UNIT-II: Scope and importance of biochemistry in animal sciences, cell structure and functions. Chemistry and biological significance of carbohydrates, lipids, proteins, nucleic acids, vitamins and hormones. Enzymes— chemistry, kinetics and mechanism of action and regulation. Metabolic inhibitors with special reference to antibiotics and insecticides. Biological oxidation, energy metabolism of carbohydrates, lipids, amino acids and nucleic acids. Colorimetry, spectrophotometry, chromatography and electrophoresis methods.

UNIT-III: Chemistry of antigens and antibodies and molecular basis of immune reaction, radio-immune assay and other assays. Chemistry of respiration and gas transport, water and electrolyte metabolism. Deficiency diseases, metabolic disorders and clinical biochemistry. Endocrine glands, biosynthesis of hormones and their mechanism of action.

UNIT-IV: History of molecular biology, biosynthesis of proteins and nucleic acids, genome organization, regulation of gene expression, polymerase chain reaction, basic principles of biotechnology applicable to veterinary science gene sequence, immunodiagnostics, animal cell culture, in vitro fertilization. Sub-unit vaccines: Principles of fermentation technology. Basic principles of stem cell and animal cloning.

Code 14: MAJOR GROUP - VETERINARY SCIENCE

(**Subjects:** **14.1**: Veterinary Anatomy(&Histology) **14.2**:VeterinaryObstetrics& Gynaecology, Reproductive Biology/ Ani. Reproduction **14.3**:Vety. Medicine (Clinical and Preventive), **14.4**: Veterinary Parasitology, **14.5**: Veterinary Pharmacology and Toxicology, **14.6**: Veterinary Pathology **14.7**: Epidemiology/ Wild Life Science/ Wild Life Health Mgt. **14.8**: Vety.Virology, **14.9**: Vety. Immunology, **14.10**: Veterinary Microbiology/ Bacteriology, **14.11**: Veterinary Surgery / & Radiology **14.12**: Veterinary Public Health)

UNIT I: Anatomy and Physiology. Structure of cells, cell organelles, chromosome structure and functions, cell growth, division and differentiation and functions. Structure and function of basic tissues-epithelium, connective tissue, muscle and nervous tissue. Gross Morphology, Histology and physiology of mammalian organs and systems, major sense organs and receptors, circulatory system. Digestion in simple stomached animals, birds and fermentative digestion in ruminants, Kidney and its functions-respiratory system-animal behaviour-growth-influence of environment on animal production-biotechnology in animal production and reproduction-electrophysiology of different types of muscle fibres. Exocrine and endocrine glands, hormones and their functions, blood composition and function. Homeostasis, osmoregulation and blood clotting. Gametogenesis and development of urogenital organs. Boundaries of body cavities. Pleural and peritoneal reflections.

UNIT-II: Veterinary Microbiology (Bacteriology, Virology, Immunology), Veterinary Pathology, Parasitology. Classification and growth characteristics of bacteria, important bacterial diseases of livestock and poultry, general characters, classification of important fungi. Nature of viruses, morphology and characteristics, viral immunity, important viral diseases of livestock and poultry. Viral vaccines. Antigen and antibody, antibody formation, immunity, allergy, anaphylaxis, hypersensitivity, immunoglobulins, complement system. Etiology of diseases and concept, extrinsic and intrinsic factors, inflammation, degeneration, necrosis, calcification, gangrene, death, atrophy, hypertrophy, benign and malignant tumours in domestic animals. General classification, morphology, life cycle of important parasites, important parasitic diseases (Helminths, Protozoa and Arthropods) of veterinary importance with respect to epidemiology, symptoms, pathogeneses, diagnosis, immunity and control.

UNIT-III: Veterinary Medicine, Epidemiology, Veterinary Surgery and Veterinary Obstetrics & Gynaecology including Reproduction. Clinical examination and diagnosis, Etiology, epidemiology, symptoms, diagnosis, prognosis, treatment and control of diseases affecting different body systems of various species of domestic animals, epidemiology— aims, objectives, ecological concepts and applications. General surgical principles and management of surgical cases. Types, administration and effects of anaesthesia. Principles and use of radiological techniques in the diagnosis of animal diseases. Estrus and estrus cycle in domestic animals, Synchronization of estrus, fertilization, pregnancy diagnosis, parturition, management of postpartum complications dystokia and its management, fertility, infertility and its management, artificial insemination.

UNIT-IV: Veterinary Public Health, Veterinary Pharmacology & Toxicology. Zoonotic diseases through milk and meat, Zoo animal health. Source and nature of drugs, pharmacokinetics, Chemotherapy-sulpha drugs, antibiotics, mechanism and problem of drug resistance. Drug allergy, important poisonous plants, toxicity of important agro-chemicals and their detoxification, drugs action on different body systems.

Code 15: MAJOR SUBJECT GROUP - ANIMAL SCIENCES

(**Subjects: 15.1**: Animal Husbandry/Animal Sci./Dairy Sci, **15.2**: Animal Genetics & Breeding, **15.3**: Animal Nutrition/Feed/Fodder Tech., **15.4**: Vety/Animal Physiology, **15.5**: Livestock Production & Management, **15.6**: Livestock Products Technology & Meat Science Tech., **15.7**: Poultry Science, **15.8**: Animal Husbandry/ Veterinary Extension Education **15.9**: Livestock/Animal Husbandry/ Veterinary Economics **15.10**: Bio-Statistics)

UNIT-I: Animal Genetics and Breeding- Principles of animal genetics, cell structure and multiplication. Mendel's laws, principles of population genetics, concept of heredity, heterosis and mutation, principles of evolution, principles of molecular genetics, genetic code, quantitative and qualitative traits. Selection of breeding methods in livestock and poultry. Population statistics of livestock.

UNIT-II: Animal Nutrition, Feed Technology, Animal Physiology. General nutrition, proximate principles, carbohydrates, proteins and fats their digestion and metabolism in ruminants and non-ruminants. Energy partition- measures of protein quality. Water, minerals, vitamins and additives, feeds and fodders and their classification. Common anti-

nutritional factors and unconventional feeds. Hay and silage making. Grinding, chaffing, pelleting, roasting, feed block. Feed formulation principles. Digestion- control motility and secretion of alimentary tract. Mechanism, natural and chemical control of respiration, gaseous exchange and transport, high altitude living, physiology of work and exercise. Cardiac cycle, natural control of cardiovascular system. Smooth and skeletal muscle contraction. Blood coagulation. Physiology of immune system. Male and female reproduction including artificial insemination, in-vitro fertilization, cryo-preservation. Excretory system.

UNIT III: Animal Husbandry, Dairy Science, Livestock Production and Management, Animal Product Technology & Meat Science and Poultry Science. General concepts of livestock production and management, status of dairy and poultry industry, impact of livestock farming in Indian agriculture. Livestock housing, production and reproduction management, lactation management, breeding programmes for livestock and poultry. Composition, quality control and preservation of livestock products, methods of processing and storage livestock products. International Trade/WTO/IPR issues related to livestock products.

UNIT IV: Veterinary Extension. Concept of sociology, differences between rural, tribal and urban communities, social change, factors of change. Principles and steps of extension education, community development– aims, objectives, organizational set up and concept evolution of extension in India, extension teaching methods. Role of livestock in economy. Identifying social taboos, social differences, obstacles in the way of organizing developmental programmes. Concept of marketing, principles of co-operative societies, animal husbandry development planning and programme, key village scheme, ICDD, Gosadan, Goshala, Role of Gram Panchayat in livestock development. Basics of statistics, data analysis and computational techniques.

VETERINARY ANATOMY AND HISTOLOGY

Dr. Ashok Pawar and Dr. Girish M.H

Department of Veterinary Anatomy and Histology, Veterinary College, Bidar

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1. The bone which is a part of axial skeleton is

   A) Femur B) Tibia C) Sacrum D) Humerus.

2. The number of Thoracic Spinal nerves present in the cattle is

   A) 7 pairs B) 13 pairs C) 18 pairs D) 37 pairs

3. The example of elongated bone is

   A) Rib B) Scapula C) Radius D) Atlas

4. A pully like structure seen on the bone is termed as

   A) Trochanter B) Trochlea. C) Spine D) condyle.

5. Collar bone of the shoulder is

   A) Scapula B) Clavicle. C) Coracoid D) Rib

6. The NAV nomenclature of shoulder girdle is

   A) Pectoral girdle B) Thoracic girdle

   C) Cingulum membri thoraci D) Extremitas thoracalis

7. The bone of the arm region is

   A) Humerus B) Radius C) Carpal D) Metacarpal.

8. The number of the functional digits in cattle is

   A) 1 B) 2 C) 3 D) 4

9. The acromion process is absent in

   A) Buffalo B) Cow C) Dog D) donkey.

10. The lateral surface face of the scapula gives attachment to

    A) Deltoideus B) Serratus ventralis C) Rhomboideus D) sub scapularis

11. The distal extremity of femur consist of

    A) Head) B) tubercle C) Trochlea D) Tuberosity

12. The number of carpal bone present in the dog in each limb

    A) 4 B) 5 C) 6 D) 7

13. The carpal bone present in cow in the proximal row

    A) 2 B) 3 C) 4 D) 5

14. The pin bone is

    A) Ilium B) Ischium C) Pubis D) Sacrum

15. The patella is seen in dog in the

    A) Shoulder joint B) Stifle joint C) Carpal joint D) Hock joint

16. The Atypical cervical vertebrae is

A) First B) Third C) Sixth D) Seventh

17. The number of cervical vertebrae present in the Horse is

A) 7 B) 8 C) 14 D) 18

18. Haemal arches are present in the coccygeal vertebrae of

A) dog B) Ox C) Horse D) Fowl

19. The number of sternal rib present in the dog is

A) 7 B) 9 C)13 D) 18

20. The foramen magnum is present in

A) Occipital bone B) Parietal C) Temporal D) Frontal

21. The unpaired cranial bone

A) Frontal B) Malar c) Vomer D) Ethmoid

22. The Supra orbital foramen present in

A) Frontal B) Maxilla C) Malar D) Palatine.

23. The largest sinus present in horse is

A) Frontal B) Maxillary C) Palatine C) Sphenoid

24. Carpal joint is classified as

A) Arthrodia B) Hinge C) Enarthroses D) Condyloid

25. The example of amphiarthroses joint is

A) Intercentral vertebral articulation B) Shoulder

C) Hock D) carpal

26. The muscle present on the lateral aspect of the shoulder is

A) Infraspinatus B) Teres Major

C) Subscapularis D) Coraco brachialis

27. The muscle present in the medial aspect of the thigh region is

A) Gluteus medius B) Semitendinosus C) Biceps femoris D) Sartorius

28. The prepubic tendon is refers to the insertion of which muscle.

A) Creamaster B) Rectus abdominis C) Abdominis internus D) Transverse abdominis

29. The fallowing is not a sublumbar muscle.

A)Psoas major B) Psoas major C) Iliacus D) Gracilis

30. The thorax muscle is

A)Serratus cervicis B) Retractor costae C) Scalenus D) Longus colli.

31. The muscle is not a part of mastication

A) Masseter B) Temporalis C) Malaris D) Diagastricus.

32. The muscle of the hyoideus apparatus is

A).Stylo glossus B) Mylo hyoideus C) Hyoglossus D) Palatinus.

33. The extrinisic muscle of larynx is

A) Crico thyroideus B) Crico arytenoideus

C) Thyro arytenoideus D) Sterno thyro hyoideus

34. Sub sinuosal groove seen on which surface of the heart

A) Left B) Right C) Anterior D) Posrerior

35. The coronary sinus present in

A) Right atrium B) Left atrium C) Right ventricle D) Left Ventricle.

36 The number of papillaries muscle present in right ventricle is

A) 2 B) 3 C) 4 D) 5

37. Two anterior vena cava are seen in

A) Dog B) Cow C) Fowl D) Horse.

38. The following artery does not arise from the thoracic aorta

A) Bronchial B) Oesopahgeal C) Vertebral D) 7^{th} intercostal

39. The artery which arises fro the subscapular artery

A) Suprascapular B) External thoracic C) Posterior circumflex D) Radial

40. The artery which passes through the carpal canal is

A) Ulnar B) Medain C) Radial D) Common interosseous

41. The Middle meningeal artery is branch of

A) Common carotid B) Occipital C) Internal maxillary D) external carotid

42. The supraorbital artery is branch of

A) Malar B) Occipital C) External ophthalmic D) External maxillary

43. The right gastric artery in ruminants is given by

A) Hepatic B) Right ruminal C) Left ruminal D) omaso abomasal

44. The paired visceral artery arises from abdominal aorta is

A) Renal B) Lumbar C) Anterior mesenteric D) Coeliac

45. Os phrenic is a visceral bone present in

A) Dog B) Camel C) Bird D) Pig

46. The posterior uterine artery is arises from

A) Abdominal aorta B) Internal iliac artery

C) External iliac artery D) Internal pudenal artery

47. The saphenous artery which supplies posterior aspect in hind limb is been replaced by artery in Horse is

A) Posterior femoral B) Posterior tibial C) Anterior tibial D) Popliteal

48. The RMC is absent in

A) Dog B) Cow C) Buffalo D) sheep

49. The largest venous trunk in the body is

A) Posterior vena cava B) Vena hemiazygos C) Anterior vena cava D) Portal vein

50. The superficial lymph node present in the head region of cattle is

A) Pterygoid B) Parotid C) Atlantal D) Prescapular

51. The lymph node present in the thoracic cavity is

A) Renal B) Mesenteric C) Mediastinal D) Coeliac

52. The popliteal lymph gland is superficial in

A) Cow B) Buffalo C) Dog D) Donkey

53. cytogenous gland is

A) Parathyriod B)Ovary C) Adrenal D)Thyroid.

54. Mucosa of a Ureter is lined by

A). Simple sqamous epithelium B). Simple Cuboidal epithelium

C)Transitional epithelium D) Pseudostratified columnar ciliated epithelium

55. Small intestine is lined by

A) Simple sqamous epithelium B) Simple Cuboidal epithelium

C) Stratified squamous epithelium D) Simple Columnar epithelium

56. The cytoskeleton of a cell is

A) Microfilaments B) Mitochondria C) Lysosomes D) Golgi bodies

57. The nucleus is cart wheel shaped in

A) Lymphocyte B) Plasma cell C) Mast cell D) Monocyte

58. The nucleus is bi nucleated in

A) parietal cell B) Plasma cell C) Basophil D) Neutrophil

59. The inclusion bodies seen in the cell is

A) Lysosomes B) Peroxisomes C) Lipofuschin D) Ribosomes

60. Simple squamous epithelium is seen in

A) Skin B) Tongue C) Pericardium D) Rumen

61. Loose connective tissue consist of cells in which most numerous is

A) Fat cell B) Plasma cell C) Histiocyte D) Eosionophil

62. The reticular tissue forms the frame work of

A) Liver B) Gall bladder C) Spleen D) Kidney

63. The white fibro cartilage seen in

A) Ear B) Inter vertebral disc C) epiglottis D) trachea

64. The ligaments are

A) Dense irregular connective tissue B) Dense regular connective tissue

C) Loose connective tissue D) Reticular tissue

65. Non granular leucocyte is

A) Basophil B) Eosinophil C) Lymphocyte D) Neutrophil

66. The perinucleus halos are seen in

A) Skeletal muscle B) Smooth Muscle C) Cardiac muscle D) Liver cell

67. The neuroglial cell is

A) Microglia B) Mast cell C) Plasma cell D) Neurolemmacyte.

68. Payer's patches are present in

A) Stomach B) Small intestine C) Large intestine D) Tongue.

69. The Brunner's glands in the duodenum are present in

A) Mucus membrane B) Sub mucosa C) Tunica Muscularis D) Tunica serosa

70. Canal of herring are observed in

A) Kidnay B) Liver C) Spleen D) Brain

71. M zone is seen in the

A) Spleen B) Thymus C) Adrenal D) Pituitary gland

72. The pineal gland is present in

A) Telen cephalan B) Mylen cephalan C) Dien cephalan D)Mesencephalan

73. The space between the duramater and arachanoid is called

A) Epidural B) Subdural C) Subarachnoid D) cisterna magna

74. The dorsal part of the mid brain is

A) tegmentum B) Tectum C) Pituitary gland D) cerebral peduncle

75. The floor of the lateral ventral is formed by

A) Fornix B) Hippoampus C) Corpus collasum D) Caudate nucleus

76. The Basal ganglia is the part of

A) Fore brain B) Mid brain C) Hind brain D) Spinal cord

77. The Inferior oblique muscle of the eye ball receive nerve supply from

A) Optic B) Trochlear C) Oculomotor D) Abducent

78. The motor cranial nerve is

A) 1^{st} B) 5^{th} C) 07^{th} D) 11^{th}

79. The longest cranial nerve is

A) Trochlear B) Vagus C) Olfactory D) Oculomotor

80.The upper eye lid receive nerve supply by

A) Frontal B) Lacrimal C) Nasociliary D) Infra trochlear

81. The following nerve is involved in para sympathetic system

A) 1st B) 4th C) 10th D) 12th

82. The motor nerve supply to the tongue is by

A) 3rd B) 5th C) 10th D) 12th

83.The phrenic nerves is formed by the union of ventral primary branches of

A) C5-C7 B) C6-C8 C) C8-T2 D) T1-T3

84. The Anterior cutaneous nerve of forearm is given by

A) Ulnar B) Axillary C) Radial D) median

85. The saphneous nerve is branch of

A) Sciatic B) Obturator C) Anterior gluteal D) Femoral

86. The peritoneum lined by

A).Simple sqamous epithelium B) Simple Cuboidal epithelium

C) Stratified squamous epithelium D) Simple Columnar epithelium

87. The following is vascular tunic of the eye

A) Iris B) Cornea C) Sclera D) Retina

88. The middle ear is located in

A) Frontal B) Temporal C) Occipital D) Sphenoid bone

89. Syndesmo chorial placenta is seen in the

A) Mare B)cow C) Dog D) cat

90. The gestation period of sheep is about

A) 30 days B) 65 days C) 115 days D) 150 days

91. The urine is stored in the foetus temporarily in

A) Amnion B) Allantois C) Yolk sac D) Chorion

92. Meckel's diverticulum is anomaly seen in the development of

A) Respiratory system B) Urinary System C) Genital System D) digestive system

93. The mesoderm derivates is

A) heart B) Liver C) Spleen D) testis

94. The endodermal derivates is

A) Pancrease B) Testis C) Kidney D) Brain

95. The first pharyngeal pouch differentiate into

A) Eustachian tube B) Palatine tonsil C) Thyroid D) Thymus

96. The time ovulation in cow with respect to the onset of oestrous

A)14 hour after B) 24 hours before C) 12 hour before D) 48 hour after

97. The taste buds are seen in

A) Filiform papillae B) Fungiform papillae C) Conical papillae D) Foliate papillae

98. The smooth surface kidneys are present in

A) Cow B) Buffalo C) Bull D) Sheep

99. The gall gladder is absent in

A) Sheep B) Cow C) Dog D) Horse

100. Hassal's corpuscles are seen in

A) Pituitary gland B) Liver C) Thymus D) Pineal gland

101. Urinary system developed from

A) Ectoderm B) Entoderm C) Mesoderm D) all .

102. The number of paired pronephric tubules are seen in the early part of the development of Kidney are about

A) 3 B) 7 C) 15 D) 30

103. The number of paired mesonephric tubules are seen in the early part of the development of Kidney are about

A) 3 B) 7 C) 15 D) 30

104. The permanent kidney are formed in ruminants from

A) pronephros B) Mesonephros C) Metanephros D) Wolffian body

105. Due to fusion of the metanephric primodia of the two sides leads to a anomaly called

A) Cystic kidney B) Horse show Kidney C)Pelvic kidney D) Forked ureter

106. Failure in the communication between the secretory and excretory tubules in development of kidney is anomaly is termed as

A) Cystic kidney B) Horse show Kidney C)Pelvic kidney D) Forked ureter

107. The following organ is developed from two layers

A) Liver B) Adrenal C) Spleen D) Heart

108. The portion which forms uterus and Vagina from the mullerian duct persists in a male in rudimentary form represented as

A) Colliculus seminalis B) testis

C) Appendix testis D) Uterus masculinus.

109. The seminal vesicle is derived from

A) Ectoderm B) Entoderm C) Mesoderm D) all

110. The Prostate and cowpoer's gland is derived from

A) Ectoderm B) Entoderm C) Mesoderm D) all.

111. The penile urethra is derived from

A) Ectoderm B) Entoderm C) Mesoderm D) all

112. The cranial group of mesonephric tubules in female persistsas

A) Epoophoron B) paroophoron C) Gartner's canal D)Clitoris

113. The double fold of peritoneum passing from stomach to other viscera is termed

A) Omentum B) Mesentery C) Ligament D) Fascia

114. The double fold of peritoneum attaches intestine to the wall of the abdomen

A) Omentum B) Mesentery C) Ligament D) Fascia

115. The double fold of peritoneum attaches Viscera other than parts of the digestive tube to the wall of the abdomen

A) Omentum B) Mesentery C) Ligament D) Fascia

116. The double fold extending from liver to the parietal surface of the omasum is

A) ligament B) lesser omentum C) Greater omentum D) pleura

117. The peritoneum is reflected and form a pouch between rectum and sacrum is

A) Recto-genital B) sacro-genital C) sacro-rectal D) vesico-genital

118. Honey comb appearance is seen in the interior of

A)Rumen B) reticulum C) Omasum D) Abomasum

119 Many longitudinal muscular folds are seen in the interior of

A) Rumen B) reticulum C) Omasum D) Abomasum

120. Saccus caecus is related to the organ in equine is

A) liver B) Abomasum C) caecum D) Colon

121 Margoplicatus a line separates non glandular and glandular parts in the stomach of

A) Cattle B) Buffalo C) Horse D) sheep

122. Ileo-caecal and caeco-colic orifice in the caecum of horse is present in

A) Apex B) Base C) Greater curvature D) Lesser curvature

123. First part of the great colon is called

A) Left ventral B)Right ventral C) Left dorsal D) Right dorsal

124. Fourth part of the great colon is called

A) Left ventral B)Right ventral C) Left dorsal D) Right dorsal

125 Two caeca are seen in

A) Bird B) Horse c) dog D) Sheep

126. The scythe shaped spleen is present in

A) Bird B) Horse c) dog D) Sheep

127. The oyster Shell shaped spleen is present in

A) Bird B) Horse c) dog D) Sheep

128. The paired cartilage in the larynx is

A) Arytenoid B) Epiglottis C) Cricoid D) Thyroid

129. The leaf like cartilage in the larynx is

A) Arytenoid B) Epiglottis C) Cricoid D) Thyroid

130. The shield shaped cartilage in the larynx is

A) Arytenoid B) Epiglottis C) Cricoid D) Thyroid

131. The organelle is responsible for reduction of hydrogen peroxide to water and oxygen

A) Microtubule B) Mitochondria C) Microbodies D) Golgi bodies

132. The organelle is responsible for production of steroid hormones

A) Smooth endoplasmic reticulum B) Mitochondria

C) Microbodies D) Golgi bodies

133. The organelle is responsible for primary respiratory in function

A) Smooth endoplasmic reticulum B) Mitochondria

C) Microbodies D) Golgi bodies

134. Davson and Danielli describe the cell membrane as

A) Unit membrane B) Bilayer of lipids C) Sandwitch model D) fluid Mosaic model

135. If the centromere present in the at one end than it is termed as

A) Metacentric B) Sub- metacentric C) Aerocentric D) Telocentric.

136. The percentage of protein in the cell is approximately

A) 85 B) 2 C) 10 D) 30

137. The intercellur junction which prevent leakage of material from the lumen is

A) Zonula occludens B) Zonula adherens C) macula adherens D) Nexus

138. The intercellur junction which are communicating junctions

A) Zonula occludens B) Zonula adherens C) macula adherens D) Nexus

139. The fixed Macrophages of connective tissues is known as

A) Mast cell B) Fibroblast C) Histiocyte. D) Plasma cell

140. The ground substance which is found in arteries is

A) Heparin sulphate B) Dermatin sulfate C) Hyaluronan D)chondroitin sulfate.

141. The light band of skeletal muscle is interconnected by

A) I line B) H line C) M line D) Z line

142. The melatonin is produced by

A) Pituitary B) Pineal C) Thyroid D) Adrenal gland

143. The purkinje cell layer is seen in

A) Cerebrum B) cerebellum C) Spinal cord D)Medulla oblongata

144. The outer most layer of the tunica intima is

A) Endothelium B) Subendothelial layer

C) Internal elastic membrane D) External elastic membrane

145. The epiglottis is lined by

A).Simple sqamous epithelium B) Simple Cuboidal epithelium

C) Stratified squamous epithelium D) PseudoStratified ciliated columnar epithelium

146. The acidophil type of cell in pituitary gland is

A) FSH B) TSH C) STH D) ACTH

147. Brain sands are characteristic of

A) Thalamus B) Pineal gland C) Thyroid D) pituitary gland

148. The cells which synthesis and store glucagon in pancreatic islets is

A) Alpha B) Beta C) delta D) Gamma

149. The cells which synthesis and store insulin in pancreatic islets is

A) Alpha B) Beta C) delta D) Gamma

150. Tapetum which gives metallic luster in eye is present in

A) Cornea B) Sclera C) Retina D) choroid

ANSWER KEY

1	C	21	D	41	C	61	C	81	C	101	C	121	C	141	D
2	B	22	A	42	C	62	C	82	D	102	B	122	D	142	B
3	A	23	B	43	A	63	B	83	A	103	D	123	B	143	B
4	B	24	A	44	A	64	B	84	B	104	C	124	D	144	C
5	B	25	A	45	B	65	C	85	D	105	B	125	A	145	C
6	C	26	A	46	D	66	C	86	A	106	A	126	B	146	C
7	A	27	D	47	B	67	A	87	A	107	B	127	D	147	B
8	B	28	B	48	A	68	B	88	B	108	D	128	A	148	A
9	D	29	D	49	A	69	B	89	B	109	C	129	B	149	B
10	A	30	B	50	B	70	B	90	C	110	B	130	D	150	D
11	C	31	C	51	C	71	A	91	B	111	A	131	C		
12	D	32	B	52	C	72	C	92	D	112	A	132	A		
13	C	33	D	53	B	73	B	93	D	113	A	133	A		
14	B	34	B	54	C	74	B	94	A	114	B	134	C		
15	B	35	A	55	D	75	A	95	A	115	C	135	C		
16	A	36	B	56	A	76	A	96	A	116	B	136	C		
17	A	37	C	57	B	77	B	97	B	117	C	137	A		
18	A	38	C	58	A	78	D	98	D	118	B	138	D		
19	B	39	C	59	C	79	B	99	D	119	C	139	C		
20	A	40	A	60	A	80	D	100	C	120	B	140	A		

1. Cytogenous gland is

a)Testis b)Pineal gland c) Adrenal d)Thyroid.

2 .Mucosa of a trachea is lined by

a). Simple sqamous epithelium b). Simple Cuboidal epithelium

c) Transitional epithelium d) Pseudostratified columnar ciliated epithelium

3. Stomach is lined by

a) Simple sqamous epithelium b) Simple Cuboidal epithelium

c) Stratified squamous epithelium d) Simple Columnar epithelium

4. The cytoskeleton of a cell is

a) Microtubules b) Mitochondria c) Lysosomes d) Golgi bodies

5. The nucleus is lobulated in

a) Neutophil b) Plasma cell c) Mast cell d) Monocyte

6. The nucleus is bi nucleated in

a) parietal cell b) Plasma cell c) Basophil d) Neutrophil

7. The inclusion bodies seen in the cell is

a) Lysosomes b) Peroxisomes c) Lipofuschin d) Ribosomes

8. Simple squamous epithelium is seen in

a) Skin b) Tongue c) Pericardium d) Rumen

9. Loose connective tissue consist of cells in which most numerous is

a) Fat cell b) Plasma cell c) Histiocyte d) Eosionophil

10. The reticular tissue forms the frame work of

a) Liver b) Gall bladder c) Spleen d) Kidney

11. The ligaments are

a) Dense irregular connective tissue b) Dense regular connective tissue

c) Loose connective tissue d) Reticular tissue

12.The white fibro cartilage seen in

a) Ear b) Inter vertebral disc c) epiglottis d) trachea

13. Non granular leucocyte is

a) Basophil b) Eosinophil c) Lymphocyte d) Neutrophil

14. The perinucleus halos are seen in

a) Skeletal muscle b) Smooth Muscle c) Cardiac muscle d) Liver cell

15. The following is not a neuroglial cell

a) Microglia b) Astrocyte c) Ependyma d) Neurolemmacyte.

16. payer's patches are present in

a) Stomach b) Small intestine c) Large intestine d) Tongue.

17. The Brunner's glands in the duodenum are present in

a) Mucus membrane b) Sub mucosa c) Tunica Muscularis d) Tunica serosa

18. Canal of herring are observed in

a) Kidnay b) Liver c) Spleen d) Brain

19. Hassal corpuscle's are seen in the

a) Spleen b) Thymus c) Adrenal d) Pituitary gland

20. The thickness of the cell membrane is approximate about

a) 2-3 cm b) 8-10 nm c)5-6 Aº d)6-8µ

21. The mammary gland is classified based on the mode of release of secretory product is

a) Merocrine b) Apocrine c) Holocrine d) cytocrine

22. The cell present in the loose connective tissue play role in immunity

a) Fibrocyte b) Fibroblast c) Plasma cell d) melanocyte.

23. Agranulocyte cell

a) Neutrophil b) Eosinophil c) Basophil d) Monocyte..

24. The neruoglial cells which forms the lining of central canal

a) Astrocytes b) oligodendrocytes c) Microglia d)Ependymal cells

25 . The following is the part of Reticulo endothelial system present in CNS

a) Kuffer cell b) Macrophage c) Microglia d) Osteoblast

26.Rods and cones present in

a) Sclera b) cornea c) Iris d) Retina

27. The vascular layer of the eye is called as

a) Retina b) Cornea c) Uvea d) Sclera

28. Organ of corti present in

a) Eye b) Ear c) Hoof d) skin

29 The lamina fusca a pigmented layer present in

a) Eye b) Ear c) horn d) skin

30. In the eye Tapetum Lucidum present in

a) Fibrous tunic b) Vascular tunic c) Nervous tunic d) Lens

31.The neuroepithelial area of present in the semicircular duct is called as

a) Macula utricle b) Macula sacculi c) Crista ampullaris d) Organ of corti.

32. Cell organelles rich in hydrolytic enzymes

a) Mitochondria b) Ribosomes c) lysosomes d) Peroxisomes

33. Irritability is a well developed property of

a) epithelial cell b) Neuron c) Muscle cell d) plasma cell

34. Centro acinar cells is characteristic of gland

a) Liver b) kidney c) pancreases d) Salivary gland

35. Beta cells in the islets constitutes about 98% in

a) dog b) Sheep c) cat d) pig

36. Stratum compactum, a layer rich in collagen fibres seen in the stomach of

a) Dog b) Goat c) Sheep d) cattle.

37. Macula densa is a part seen in

a) Proximal convoluted tubule b) distal convoluted tubule

c) Thin loop of henle d) Collecting duct.

38. Pulmonary surfactant is secretory product of

a) Type-I Pneumonocytes b) Type-II Pneumonocytes

c) Pulmonary Macrophages d) Membranous Pneumonocytes

39. Acidophils of pituitary glands are

a) Somatotrophs b) Gonodotrophs c) Thyrotrophs d) ACTH cells

40. The Brain sand are seen in

a) pituitary b)Pineal gland c) Thyroid d) Adrenal

41. The parafollicular cells are present in

a) pituitary b)Pineal gland c) Thyroid d) Adrenal

42. Oxphil cells occur in

a) Pituitary b)Pineal gland c) Parathyroid d) Adrenal

43. Spongiocytes are present in

a) Pituitary b)Pineal gland c) Thyroid d) Adrenal

44.Chromaffin cells are seen in

a) Adrenal b) Thyroid c) Kidney d) Liver

45. Glucagon produced in the islets by

a) Alpha cell b) beta cell c) Delta cell d) Gama cell

46. The muscularis mucosa absent in

a) Rumen b) Abomesum c) Omasum d) jejunum

47. Corpora amalycea seen in

a) Prostate gland b) Pineal gland c) Parotid gland d) testis

48. Lydig cells are present in

a) Testis b) Ovary c) adrenal d) Thyroid

49. Call exnar bodies are seen in

a) Testis b) Ovary c) adrenal d) Thyroid

50. The power house of the cell is

a) Mitochondria b) lysosomes c) Endoplasmic reticulum d) Ribosomes

51.The study of joints is called

a) Osteology b) Myology c) Syndesmology d) Aesthesiology

52.The bone which is a part of axial skeleton is

a) Femur b) Tibia) c)Frontal d) Humerus.

53. The example of irregular bone is

a) Vertebrae b) Ischium c) Radius d) Rib

54. A small blunt projection seen on the bone is termed as

a) Trochanter b) Tubercle. c) Spine d) condyle.

55. Collar bone of the shoulder is

a) Scapula b) Clavicle. c) Coracoid d) Rib

56. The NAV nomenclature of shoulder girdle is

a) Pectoral girdle b) Thoracic girdle

c) Cingulum membri thoracici. d) Extremitas thoracalis

57. The bone of the antibrachial region is

a) Humerus b) Radius c) Carpal d) Metacarpal.

58. The number of the functional digits in equine is

a) 1 b) 2 c) 3 d) 4

59. The acromion process is absent in

a) Buffalo b) Cow c) Dog d) Horse.

60. The medial face of the scapular cartilage gives attachment to

a) Deltoideus b) Serratus ventralis c) Rhomboideus d) sub scapularis

61. The distal extremity of humerus consist of

a) Head b) tubercle c) Condyle d) Tuberosity

62. The number of carpal bone present in the buffalo is

a) 4 b) 5 c) 6 d) 7

63. The carpal bone present in dog in the proximal row

a) 2 b) 3 c) 4 d) 5

64. The hook bone is

a) Ilium b) Ischium c) Pubis d) Sacrum

65. The fabella are seen in dog in the

a) Shoulder joint b) Stifle joint c) Carpal joint d) Hock joint

66. The longest cervical vertebrae is

a) First b) Second c) Sixth d) Seventh

67. The number of cervical vertebrae present in the bird is

a) 7 b) 8 c) 14 d) 18

68. Haemal arches are present in the coccygeal vertebrae of

a) dog b) Ox c) Horse d) Fowl

69. The number of sternal rib present in the dog is

a) 7 b)9 c)13 d) 18

70. The foramen magnum is present in

a) Occipital bone b) Parietal c) Temporal d) Frontal

71. The unpaired cranial bone

a) Frontal b) Malar c) Vomer d) Ethmoid

72. The infra orbital foramen present in

a) Frontal b) Maxilla c) Malar d) Palatine.

73. The largest sinus present in horse is

a) Frontal b) Maxillary c) Palatine c) Sphenoid

74. Elbow joint is classified as

a) Arthrodia b) Hinge c) Enarthroses d) Condyloid

75. The example of amphiarthroses joint is

a) Intercentral vertebral articulation b) Shoulder c) Hock d) carpal

76. The muscle present on the lateral aspect of the shoulder is

a) Deltoideus b) Teres Major c) Subscapularis d)Coraco brachialis

77. The muscle present in the medial aspect of the thigh region is

a) Gluteus medius b) Semitendinosus c) Sartorius d) Biceps femoris

78. The prepubic tendon is refers to the insertion of which muscle.

a) Creamaster b) Rectus abdominis

c) Abdominis internus d) Transverse abdominis

79. The fallowing is not a sublumbar muscle.

a)Psoas major b) Psoas major c) Iliacus d) Gracilis

80. The thorax muscle is

a) Retractor costae b)Serratus cervicis c) Scalenus d) Longus colli.

81. The muscle is not a part of mastication

a) Masseter b) Temporalis c) Diagastricus d) Malaris.

82. The muscle of the hyoideus apparatus is

a).Stylo glossus b) Mylo hyoideus c) Hyoglossus d) Palatinus.

83. The extrinisic muscle of larynx is

a) Crico thyroideus b) Crico arytenoideus

c) Thyro arytenoideus d) Sterno thyro hyoideus

84. Sub sinuosal groove seen on which surface of the heart

a) Left b) Right c) Anterior d) Posrerior

85. The coronary sinus present in

a) Right atrium b) Left atrium c) Right ventricle d) Left Ventricle.

86. The number of papillaries muscle present in left ventricle is

a) 2 b) 3 c) 4 d) 5

87. Two anterior vena cava are seen in

a) Dog b) Cow c) Fowl d) Horse.

88. The following artery does not arise from the thoracic aorta

a) Bronchial b) Oesopahgeal c) Vertebral d) 7^{th} intercostal

89. The artery which arises fro the subscapular artery

a) Suprascapular b) External thoracic c) Thoraco dorsal d) Median

90. The artery which passes thorough the carpal canal is

a) Ulnar b) Medain c) Radial d) Common interosseous

91. The posterior meningeal artery is branch of

a) Common carotid b) Occipital c) Internal maxillary d) external carotid

92. The supraorbital artery is branch of

a) Malar b) Occipital

c) External ophthalmic d) External maxillary

93. The right gastric artery in ruminants is given by

a) Hepatic b) Right ruminal c) Left ruminal d)omaso abomasal

94. The paired visceral artery arises from abdominal aorta is

a) Renal b) Lumbar c) Anterior mesenteric d) Coeliac

95. Os phrenic is a visceral bone present in

a) Dog b) Camel d) Cow d) Pig

96. The anterior uterine artery is arises from

a) Abdominal aorta b) Internal iliac artery

c) External iliac artery d) Internal pudenal artery

97. The saphenous artery which supplies posterior aspect in hind limb is been replaced by artery in Horse is

a)Posterior femoral b) Posterior tibial c) Anterior tibial d) Popliteal

98. The RMC is absent in

a) Dog b) Cow d) Buffalo d) sheep

99. The largest venous trunk in the body is

a)Posterior vena cava b) Vena hemiazygos c) Anterior vena cava d) Portal vein

100. The superficial lymph node present in the head region of cattle is

a) Pterygoid b) Parotid c) Atlantal c) Prescapular

101. The lymph node present in the thoracic cavity is

a)Renal b) Mesenteric c) Mediastinal d) Coeliac

102. The popliteal lymph gland is superficial in

a) Cow b) Buffalo c) Dog d) Donkey

103. The following is endodermal in origin

a) Kidney b) Liver c) Testis d) ovary

104. The following is ectodermal in origin

a) Kidney b) Liver c) Testis d) Brain

105. The following is mesodermal in origin

a) Spleen b) Liver c) Testis d) Trachea

106. The period of ovum is

a) 1day b) 14days c)28 days d) 45days

107. The Gesatation period of pig is about

a) 60 day b) 96days c)114days d) 154 days

108. In the cow nidation takes place approximately

a) 10-22days b) 5-10days c)1-2days d) 40- 45days

109. The incubation time in turkey is

a) 16days b) 20days c)21days d) 28days

110. Sister chromosomes moves towards poles of the spindle in

a) Prophase b) Metaphase c) Anaphase d) Telophase

111. Mandible is derivative of

a) 1^{st} Branchial arch b) 2^{nd} Branchial arch

c) 3^{rd} Branchial arch d) 4^{th} Branchial arch

112. Thymus is derivatives of

a) 1^{st} Pharyngeal pouch b) 2^{nd} Pharyngeal pouch

c) 3^{rd} Pharyngeal pouch d) 4^{th} Pharyngeal pouch

ANSWER KEY

1	A	21	B	41	C	61	C	81	D	101	C
2	D	22	C	42	C	62	C	82	B	102	C
3	D	23	C	43	D	63	B	83	D	103	B
4	A	24	D	44	A	64	A	84	B	104	D
5	A	25	C	45	A	65	B	85	A	105	C
6	A	26	D	46	A	66	B	86	A	106	B
7	C	27	C	47	A	67	C	87	C	107	C
8	C	28	B	48	A	68	A	88	C	108	A
9	C	29	A	49	B	69	B	89	C	109	D
10	C	30	B	50	A	70	A	90	A	110	C
11	B	31	C	51	C	71	D	91	A	111	A
12	B	32	C	52	C	72	B	92	C	112	C
13	C	33	B	53	A	73	B	93	A		
14	C	34	C	54	C	74	B	94	A		
15	D	35	B	55	B	75	A	95	B		
16	B	36	A	56	C	76	A	96	A		
17	B	37	B	57	B	77	C	97	B		
18	B	38	B	58	A	78	B	98	A		
19	B	39	A	59	D	79	D	99	A		
20	B	40	B	60	C	80	A	100	B		

VETERINARY PHYSIOLOGY

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1. Anterior pituitary is embryologically developed from

a. Neural tube b. Neural crest c. Pharyngeal epithelium d. None

2. The most effective stimulus for cerebral circulation is

a. Oxygen deficiency b. Baro-receptor reflex c. Decreased glucose d.Excess CO_2

3. Most of the blood clotting factors are produced in

a. Liver b. Lung c. Kidney d. Spleen

4. HCl and pepsin secretion in ruminants is by

a. Rumen b. Reticulum c. Omasum d. Abomasum

5. Increase in one hormone level in circulation may decrease the affinity of receptor for other hormone by

a. Negative co-operativity b. Positive co-operativity

c. Permission action d. both b& c

6. Animal in which the internal temperature varies with external temperature are called as

a. Temperature regulators b. Temperature conformers

c. Heterotherms d. Endotherms

7. Bulbo-urethral gland is absent in

a. Dog b. Boar c. Bull d. Stallion

8. Split heat is usually observed in

a. Buffalo b. Bitch c. Mare d. Cow

9. Thermoregulation centre is located in

a. Hypothalamus b. Thalamus c. Motor cortex d. Hippocampus

10. Among the following domestic animals, sweating ability is highest in

a. Cattle b. Horse c. Sheep d. Goat

11. Major route of heat loss in cattle during high environmental temperature is by

a. Conduction b. Convection c. Radiation d. Evaporation

12. Site of formation of CSF is

a. Choroid plexus b. Astrocytes c. Meninges d. Sinuses

13. Type of sensory receptors involved in initiation of micturition reflex is

a. Chemoreceptors b. Nociceptors c. Osmoreceptors d. Stretch receptors

14. Pancreatic bicarbonate secretion is enhanced by

a. Secretin b. Motilin c. Cholecystokinin d. Gastrin

15. Sympathetic post-ganglionic neurotransmitter is

a. Nor-epinephrine b. Acetylcholine c. Serotonin d. 5-HT

16. Sertoli cells of testes secrete

a. Inhibin b. Estrogen c. Androgen binding protein d. All

17. Which one of the following circulatory division has the lowest pressure?

a. Capillaries b. Arteries c. Veins d. Arterioles

18. Which segment of the renal tubule is impermeable to water?

a. Proximal convoluted tubule b. Thick segment of ascending loop of Henle

c. Collecting duct d. Thin segment of descending loop of Henle

19. Cardiac output can be represented by the formula

a. Stroke Volume/Pulse rate b. Stroke Volume – Pulse rate

c. Stroke Volume X Pulse rate d. Pulse rate/Stroke Volume

20. During atrial systole, the ventricles are in a state of

a. Systole b. Diastole c. Iso-volumic contraction d. None

21. Which one of the following neurotransmitter is inhibitory in nature?

a. GABA b. Acetyl choline c. Glutamic acid d. Adrenaline

22. Avascular structure of eye is

a. Cornea b. Sclera c. Iris d. Lens

23. Among glial cells, one of the following is highly phagocytic

a. Astrocyte b. Microglia c. Schwaan's cell d. Oligodendrocytes

24. Gaseous exchange at tissue level is referred as

a. Breathing b. Ventillation

c. Internal respiration d. External respiration

25. "The breeds which inhabit warm and humid regions have more melanin pigmentation than those of the same species in cooler and drier region" is

a. Golger's rule b. Bergman's rule c. Allen's rule d. Wilson's rule

26. Substance used to measure total body water by dye dilution technique is

a. Antipyrine b. Insulin c. Thiosulfate d. Inulin

27. A biological rhythm of 24 hrs duration is known as

a. Ultradian rhythm b. Circadian rhythm c. Infra-red rhythm d. Annual rhythm

28. Part of the brain important for smooth, accurate and coordinated movement is

a. Hypothalamus b. Cerebrum c. Cerebellum d. Thalamus

29. CO_2 is mainly transported in blood as

a. Carbaminohemoglobin b. Carboxyhemoglobin

c. Oxyhemoglobin d. Bicarbonate ions

30. The substance that constitute maximally to the osmolarity inside the cells is

a. Protein b. Phosphate c. Urea d. Potassium

31. The term 'Milieu interior' was introduced by

a. Cunningham b. Boyle c. Claud Bernard d. Arthur C Guyton

32. S.A.Node is the pacemaker of heart because of

a. Location in the right atrium b. Neural control

c. Natural leakiness to Na^+ d. Natural leakiness to K^+

33. Increased vagal tone causes

a. Hypertension b. Tachycardia c. Bradycardia

d. Increase in cardiac output

34. The hormones secreted by group of cells which have actions on nearby cells are known as

a. Endocrine b. Autocrine c. Paracrine d. Neurocrine

35. Biological action of hCG is similar to that of

a. FSH b. LH c. Prolactin d. Inhibin

36. Zona glomerulosa mainly secretes

a. Glucocorticoids b. Mineralocorticoids c. Sex steroids d. None

37. Which of the following is not a protein hormone

a. FSH b. Growth Hormone c. Thyroxine d. Relaxin

38. The receptors for thyroid hormones are situated on

a. Cell membrane b. Cytoplasm c. Nucleus d. Golgi apparatus

39. Melatonin hormone is secreted by

a. Pineal gland b. Post. Pituitary c. Adrenal cortex d. Hypothalamus

40. Diabetes insipidus is because of deficiency of

a. Insulin b. Inulin c. Insulin receptors d. ADH

41. Hormone essential for let down of milk is

a. Oxytocin b. Prolactin c. Placental lactogen d. Thyroxine

42. The most potent mineralocorticoid is

a.Cortisol b. Aldosterone c. Dexamethasone d. Testosterone

43. Blood calcium level is increased by

a.Calcitonin b. Parathyroid hormone c. Thymulin d. Aldosterone

44. One of the following hormone is an amino acid derivative

a. Epinephrine b. Norepinephrine c. Thyroxine d. All of them

45. Name the hormone, predominantly produced in response to fight, fright and flight

a. Thyroxine b. Aldosterone c. Epinephrine d. ADH

46. The hormone essentially required for the implantation of fertilized ovum and maintenance of pregnancy

a. Progesterone b. Estrogen c. Cortisol d. Prolactin

47. The precursor for the synthesis of steroid hormones is

a. Acetic acid b. Cholesterol c. Dopamine d. Tyrosine

48. Insulin is secreted by_____ cells of islets of langerhans

a. Alpha-cells b. Beta-cells c. Gamma-cells d. Delta-cells

49. Which of the following acts as second messenger?

a. cAMP b. Inositol triphosphate c. Calmodulin d. All of them

50. The hormone that stimulates gall bladder contraction and release of pancreatic enzymes

a. Gastrin b. Secretin c. Cholecystokinin d. Pancreatic polypeptide

51. The receptors for steroid hormones are found on

a. Cell membrane b. Cytoplasm c. Nucleus d. Mitochondria

52. The concentration of hormone in the blood can be measured by

a. ELISA b. RIA c. EIA d. All of them

53. Among the following, smallest erythrocytes are found in

a. Dog b. Goat c. Cattle d. Poultry

54. Natural anticoagulant heparin is produced by

a. Mast cells b. Platelets c. Macrophages d. Band cells

55. Chief site of plasma protein synthesis

a. Liver b. Brain c. lung d. Intestine

56. Normal resting membrane potential of SA node

a. -55 mV b. -80mV c. -90mV d. -75mV

57. Pernicious anemia is due to

a. Deficiency of Vit-B_{12} b . Deficiency of cobalt

c. Inability to produce intrinsic factor d. Deficiency of folic acid

58. S_3 and S_4 cardiac sounds are very common in

a. Horse b. Cattle c. Goat d. Dog

59. Erythrocytes in camel are

a. Elliptical & Non-nucleated b. Biconcave & Nucleated

c .Discoid & Non-nucleated d. Elliptical & Nucleated

60. The conduction of cardiac impulses is highest in

a. SA Node b. AV Node c. AV bundle d. Purkinje Fibers

61. Ability of the cardiac muscle to generate spontaneous wave of depolarization is called

a. Ionotropism b. Chronotropism

c. Staircase Phenomenon d. Functional syncytium

62. Which of the following condition shifts the Oxygen-Hemoglobin curve to the left

a. Acidic pH b. 2, 3-Diphosphoglycerate c. High temperature d. Fetal Hb

63. Fick's principle is used to measure

a. Arterial pressure b. Cardiac output c. Stroke volume d.Venous pressure

64. Mean arterial pressure is highest in

a. Poultry b. Cattle c. Horse d. Dog

65. Yellow coloration of the blood plasma in horse is attributed to

a. Bilirubin b. Hemoglobin c. Biliverdin d. Cholic acid

67. Largest descending tract of the spinal cord is

a. Rubrospinal tract b. corticospinal tract

c. Reticulospinal tract d. Tactospinal tract

68. An example for monosynaptic reflex

a. Withdrawal reflex b. Myotatic reflex c. Blink reflex d. Scratch reflex

69. Silent area of the brain is

a. Cerebellum b. Cerebrum c. Pons d. Medulla oblongata

70. Dyslexia is caused by the lesion in the

a. Visual sensory area b. auditory sensory area c.Wernick's area d. Broca's area

71. Anterograde amnesia is caused by the lesion in the

a. Amygdala b. Hypothalamus c. Thalamus d. Hippocampus

72. An example for amylolytic bacteria is

a. *Bacteroides ruminicola* b. *Butyrivibrio fibrisolvens*

c. *Ruminicoccus bromii* d. *Traponema bryantii*

73. Number of bacteria per gram of rumen content is higher in ruminants that are fed with

a. Green fodder b. Dry fodder c. Concentrates d. Hay

74. The chemical that is used for defaunation is

a. Calcium chloride b. Calcium carbonate c.Calcium peroxide d. Sodium chloride

75. Key intermediate of rumen carbohydrate fermentation is

a. Butyrate b. Acetate c. Propionate d. Pyruvate

76. Synthesis of milk fat in ruminants requires

a. Butyric acid b. Propionic acid c. Lactic acid d. Carbonic acid

77. Structure involved in gaseous exchange in birds

a. Alveoli b. Septum c. Bronchi d. Parabronchi

78. Blood volume accounts for _____ % of body weight

a. 80% b. 0.8% c. 8% d. 0.6%

79. Expansion of the lungs with each unit increase in transpulmonary pressure is called

a. Distensibility b. Compliance c. Recoiling pressure d. Elasticity

80. RMP in resting cells is due to activity of

a. Na+-K+ ATPase pump b. Voltage gated Na+ channels

c. Voltage gated K+ channels d. Chloride channels

81. The different events that follow during the estrus cycle are

a. Increased FSH, ovulation, luteinization, LH surge.

b. Luteinization, Increased FSH, ovulation, LH surge.

c. Increased FSH, LH surge, ovulation, luteinization.

d. Increased FSH, ovulation, LH surge, luteinization.

82. Blood osmotic pressure is mainly due to

a. Water b. Blood cells c. Plasma proteins d. None

83. Which is the highly sensory stimulus for salivary secretion?

a. Taste b. Smell c. Vision d. Excitement

84. A substance which increases the salivary secretion is called:

a. Anhidrotic b. Sialogogus c. Diuretic d. Cholorectics

85. It is not the function of bile salts:

a. Emulsfication b. Lowering the surface tension

c. Hydrolysis of lipids d. Increasing the surface tension

86. Gibbs-Donnan effects leads to

a. Non-diffusible ion between two sides will be equal

b. diffusible ions between two sides will be equal

c . Equal passive diffusion

d. Osmotic gradient

87. The principal cation in the extracellular fluid is

a. Na^+ b.K c. Ca^{2+} d.Mg^{2+}

88. Increased GFR caused by

a. Increased cardiac output b. Afferent arteriolar vasoconstriction

c. Efferent arteriolar vasodilatation d.Increased chloride delivery to macula densa

89. Which of the following carbohydrate is present in seminal fluid and not produced anywhere in the body

a.Glucose b.Fructose c. Ribose d.Lactose

90. An ECG would be useful for determining a patients

a. Heart murmur b. Stroke volume c. Cardiac ouput

d. Blockage of conduction of electrical signal between the atria and the ventricle

91. According to the Frank-Starling mechanism of the heart

a. The left ventricle ejects a large volume of blood with each systole than the right ventricle

b. The intrinsic rate of heart's pacemaker is 100 beats/min

c. Cardiac output increased with increased heart rate

d. Stroke volume increased with increased venous return

92. Retention of sodium in the body leads to a retention of

a. Potassium b. Water c. both a & b d. neither a or b

93. Which of the following statements is correct?

a. Thyroxine inhibits utilization of glucose

b . Insulin increases utilization of glucose

c. Glucagon promotes muscle glycogenolysis

d. Insulin inhibits lipogenesis from carbohydrates

94. All the following hormones use cAMP as a second messenger except

a. Estrogen b. FSH c. Luteinizing d. Glucagon

95. The type of placenta in bitches is

a. Epitheliochorial b. Endotheliochorial c. Syndesmochorial d. Haemochorial

96. The hormones secreted during non-shivering thermogenesis are

a. Epinephrine and thryoxine b. Cortisol and insulin

c. GH and oxytocin d. Insulin and glucagon

97. Cryptorchidism means

a. Descent of testis b. Hypogonadism

c. Hyperfunction of testis d. Undescended testis

98. Erythropoietin

a. Contains iron b. has no effect on WBC

c. Stimulates renin secretion d. Increases half life of RBC

99. Which of the following is not increased during exercise

a. Stroke volume b. Total peripheral resistance c. Systolic pressure d. Heart rate

100. Iron is absorbed in

a. Stomach b. Duodenum c. Jejunum d. Ileum

101. Smooth muscle need help of

a. Calmodulin for contraction b. Acetyl choline for contraction

c. K+ for contraction d. Monoamine oxidase for contraction

102. The cross bridges of the sarcomere in skeletal muscle are components of

a. Actin b. Myosin c. Troponin d. Tropomyosin

103. The likely mechanism through which neostigmine acts in improving muscular weakness

a. It blocks action of acetylcholine

b. It interferes with action of mono-amine oxidase

c. It enhances the action of catecholamines

d. It blocks action of acetyl choline esterase

104. A skeletal muscle

a. Obeys all or none phenomenon

b. Becomes less excitable when its membrane becomes hyperpolarized

c. Has a resting membrane potential positive inside

d. Contains excessive Na+ in intracellular compartment

105. Cellular immunity is due to

a. B lymphocytes b. T lymphocytes c. Neutrophils d. Eosinophils

106. Action of plasmin is

a. to remove calcium b. Antithrombin action

c. To stimulate heparin d. To degenerate fibrin

107. Osmotic pressure of plasma is mainly maintained by

a. Albumin b. Alpha globulin c. Beta globulin d.Gamma globulin

108. Which is the most rare human blood group

a. A Rh+ b. AB Rh+ c. AB Rh- d. B Rh-

109. Hematocrit of 45% means that in the sample of blood analysed

a. 45% Hb is in the plasma b. 45% of total blood volume is made up of plasma

c. 45% of Hb is in the RBC d. 45% of the total blood volume is made up of RBC's and WBC's

110. Positive bathmotropic effect on heart is produced by

a. Stimulation of vagus nerve b. Stimulation of sympathetic nerves

c. Atropin d. Sectioning of vagus

111. Mary's law denotes relationship between heart and

a. Contractility and conductivity b. Rate and contraction

c. Rate and BP d. Contraction and BP

112. Which of the following conducting systems has the slowest conducting velocity

a. SAN b. Atrial muscle c. Purkinje fibres d. AVN

113. In heart, within physiological limits the force of contraction is directly proportional to the

a. Pacemaker activity b. A-V nodal delay

c. Initial length of the cardiac muscle d. Respiratory rate

114. The diacrotic notch on aortic pressure curve is caused by

a. Closure of mitral valve b. Closure of tricuspid valve

c. Closure of atrial valve d. Closure of pulmonary valve

115. The PR interval of ECG corresponds to

a. Ventricular repolarization b. Ventricular repolarization

c. Atrial repolarization and conduction through AV node

d. Repolarization of AV node and bundle of His

116. Increased vagal tone causes

a. Hypertension b. Tachycardia

c. Bradycardia d. Increase in cardiac output

117. Which of the following is not increased during exercise

a. Stroke volume b. Total peripheral resistance c. Systolic BP d.Heart rate

118. Which of the following takes longest time to return to normal after 1L of blood is removed from a normal individual

a. Number of RBC's in peripheral blood b. Plasma volume

c. Renin secretion d. Blood pressure

119. When a pheochromocytoma suddenly discharges a large amount of epinephrine into the circulation the patients heart rate would be expected to

a. Increase because epinephrine has a direct chronotropic effect on the heart

b. Increase because of increased parasympathetic discharge to the heart

c. Decrease because the increase in blood pressure stimulates the carotid and aortic baroreceptors

d. Decrease because of increased tonic parasympathetic discharge to heart

120. As one ascends to higher than 3000meters above sea level changes in alveolar PO2 and PCO2 are as follows

a. Decrease in PO2, increase in PCO2 b. Decrease in PO2, decrease in PCO2

c. Increase in both PO2 and PCO2 d. Increase in PO2, decrease in PCO2

121. Surfactant is secreted by

a. Type 1 pneumatocytes b. Type 2 pneumatocytes

c. Goblet cells d.Pulmonary vessels

122. Which of the following effects is not observed during prolonged stay is space

a. Decrease in blood volume b. Decrease in muscle strength

c. Increase in red cell mass d. loss of bone mass

123.Which of the following discharge spontaneously during quiet breathing

a. Stretch receptors in lung b. Motor neurons in respiratory muscles

c. Dorsal respiratory group of neurons d. Ventral respiratory group of neurons

124. Pneumatic center functions primarily to

a. Limit inspiration b. Prolong expiration

c. Decrease rate d. Discharge inspiratory action potential

125. Which of the following is the effect of negative G on the eye

a. Temporary blinding with redout b. Blackout of vision within few seconds

c. No effect d. Redout and blackout

126. Airway resistance

a. Increases in asthama b. Decreases in emphysema

c. Increases in paraplegic patients d. Does not affect work of breathing

127. Decrease on PCO2, decrease in H+ and increased PO2 causes

a. Hyperventilation b. Hypoventilation c. Hypercapnoea d. Hypoxia

128. Herring-Breur inflation reflex in human being

a. Decreases the rate of respiration

b. Is not activated until the tidal volume increases above 1.5 lit

c. Is an important factor in normal control of ventilation

d. Is activated only when tidal volume is les than 1 lit.

129. Total vital capacity is decreased but timed vital capacity is normal in

a. Bronchial asthama b. Scoliosis c. Chronic bronchitis d. All

130. The intrapleural pressure at the end of deep inspiration is

a. - 4mm Hg b. + 4 mm Hg c. - 6mm hg d. + 6 mm Hg

131. Premotor cortex refers to

a. Some areas anterior to primary motor cortex causing complex co-ordinate movements like speech; eye moment

b. An area of motor cortex responsible for voluntary movements

c. An area in temporal cortex

d. An area of cerebellum

132. Functions of limbic system are all EXCEPT

a. Olfaction b. Gustation c. Feeding behaviour d.Sexual behaviour

133. REM is

a. Characterised by delta waves on ECG

b. A sound and dreamless sleep

c. Characterised by total lack of muscular activity

d. Referred to as paradoxical sleep

134. Sleep deprivation

a. Can cause psychotic episodes b. Is associated wit sluggishness of thoughts

c. Makes a person more alert d. Has no effect on the individual

135. The sympathetic system

a. Has short post ganglionic fibres b. Consists of vagus nerve

c. Produces nicotine at its nerve endings

d. Has a thoraco-lumbar outflow from the spinal cord

136. Visceral pain

a. Shows relatively rapid adaptation

b. Is mediated by beta fibres in dorsal root of spinal nerves

c. Can sometimes be relieved by applying irritant to skin

d. Can be produced by prolonged stimulation of touch receptors

137. The naked nerve endings are responsible for the sensation of

a. Pain b. Touch c. Hearing d. Vision

138. When a normally innervated skeletal muscle is stretched the initial response is contraction, with increase in the stretch sudden relaxation occurs because of

a. Decrease in gamma efferent discharge

b. Inhibition of the discharge from annulospiral endings of afferent nerve fibres

c. Decreased activity of afferent nerve fibres from golgi tendon organs

d. Increased activity of afferent nerve fibres from golgi tendon organs

139. After anterolateral cordotomy relief of pain is due to interruption of

a. Left dorsal column b.Left ventral spinothalamic tract

c. Right lateral spinothalamic tract d.Left lateral spinothalamic tract

140. Parasympathetic system

a. Has short preganglionic fibres b. Secretes dopamine

c. Controls most of the movements and secretions of gut

d. Brings increase in heart rate during exercise

141. Hypopituitarism is characterized by

a. Infertility b. Intolerance to heat c. Weight gain

d. Excessive growth of the soft tissue

142. Excessive growth hormone secretion in adults causes

a. acromegaly b. gigantism

c. increased entry of glucose in muscles d. hypothyroidism

143) Angiotensin increases blood pressure by acting on the following EXCEPT

a. Aldosteron secretion b. Vascular smooth muscle

c. Parasympathetic nervous system d. Sympathetic nervous system

144. Erythropoietin

a. Contains iron b. Has no effect on WBC count

c. Stimulates renin secretion d. Increases half life of RBC

145. Somatostatin

a. Inhibits insulin and glucagoon release b. Stimulates insulin and glucagon release

c. Stimulator of glucagon release d. Acts as obesity hormone

146. Testosterone is secreted by

a. Sertoli cells of testis b. Cells of adrenal medulla

c. Cells of hypothalamus d. Leydig cells of testis

147. Cryptorchidism means

a. Descent of testis b. Hypogonadism

c. Hyperfunction of the testis d. Undescended testis

148. Androgen binding protein is produced by

a. Adrenals b. Hypothalamus c. Sertoli cells d. Leydig cells

149. All of the following are produced by the corpus leuteum except

a. Estrogens b. Progesteron c. Relaxin d. F.S.H.

150. The testis is kept at a temperature of 2-3 degrees C below core temperature due to

a. Contraction of cremasteric muscle b. Contraction of dartos muscle

c. Contraction of internal oblique muscle

d. Relaxation of cremasteric muscle and due to position of testis outside pelvic cavity

151. The somatic cells containing the full complement of 46 chromosomes in their nuclei, containing all the genes necessary for carrying out the cell activities are called

a. Autosomes b. Haploid cells c. Allosomes d. Diploid cells

152. In some cases DM is due to

a. Excessive receptors b. Antibodies against receptors

c. Deficiency of receptors for extra cellular proteins

d. Deficiency of nucleotide regulatory G proteins

153. Many substances are removed from the cell to outside by

a. Pinocytosis b. Chemotaxis c. Phagocytosis d. Exocytosis

154. Excessive formation of a substance/ secretion in the body is controlled in order to maintain Homeostasis is

a. +Ve feedback mechanism b. -Ve feedback mechanism

c. Osmosis d. Haemodynamics

155. An action potential in a nerve

a. Is terminated by influx of Na+ excessive receptors b. Is terminated by efflux of K+

c. Is initiated by efflux of Na+ d. Is initiated by influx of K+

156. " Milieu interior " is a term introduced by

a. Laplace b. Boyle c. Claud Bernard d. Lansteiner

157. An example of co-transport is

a. Na+-K+ pump b. Ca++ pump c. Na+- H+ pump d. Na+ glucose transport

158. The function of tropomyosin in skeletal muscle is-

a. Sliding on actin to produce shortening

b. Releasing Ca++ after initiation of contraction

c. Binding to myosin during contraction

d. Covering up the actin binding sites of myosin at rest

159. The normal A/G ratio in blood is

a. 1:2 b. 2:1 c. 1:3 d. 3:1

160. Which of the following statements concerning the monocyte is incorrect

a. More common in blood than eosinophils and basophils

b. Produced in the adult by the bone marrow and lymph nodes

c. Unlike neutrophil does not accumulate outside circulation in area of inflammation

d. Not classified as a granulocyte

161.The normal non fasting blood ketone level is

a. 0.1 - 0.5 mg% b. 0.5- 2 mg% c. 2- 10 mg % d. 100 - 500 mg%

162. The 'T' wave in ECG is above the isoelectric line because of

a. Depolarisation of ventricles

b. Depolarisation of bundle of His

c. Change in direction of repolarisation from wave of depolarization of the ventricles

d. Repolarisation of purkinje fibres

163. The 's' wave in ECG is below isoelectric line because of

a. Repolarization of ventricles

b. Change in direction of impulse when base of the ventricles are getting depolarised

c. Depolarisation of apex of heart

d. Repolarisation of apex of heart

164. Which of the following is least likely to cause hypertension?

a. Chronically increased secretion of adrenal medulla

b. Treatment with OCP

c. Chronically increased secretion of thyroid gland

d. Chronically increased secretion by zona glomerulosa of adrenal cortex

165. Lymph flow from the foot is

a. Increased when an individual rises from the supine to standing position

b. Increased by massaging the foot

c. Increased when capillary permeability is decreased

d. Decreased by exercise

166.The pressure in the radial artery is determined by

a. The degree of constriction of brachial vein

b. The rate of discharge in sympathetic nerve fibres to the arm

c. Pressure in the hepatic portal vein

d. Pressure in the brachial vein

167. Saliva is responsible for all EXCEPT

a. Helps in deglutition b. Prevents dental carie

c. Is essential for complete digestion of starch d. Prevents decalcification of the teeth

168. Steatorrhoea may be caused by all factors except

a. Pancreatectomy b. Gastrin secreting hormone

c. Resection of distal ileum d. Hemolytic jaundice

169. Normal swallowing is dependant on the integrity of the

a. 9th and 10th cranial nerves b. Pyramidal tract

c. Trigeminal nerve d. Appetite center of hypothalamus

170. Secretion of intrinsic factor occurs in

a. Parietal cells of stomach b. Chief cells of stomach

c. Upper abdomen d. Alpha cells of pancreas

171. In which of the following is absorption of water greatest

a. Colon b. Jejunum c. Duodenum d. Stomach

172. Secretin is released by

a. Acid in duodenum b. Acid in stomach

c. Cells in the liver d. Distention of colon

173. Which of the following would not be produced by total pancreatectomy?

a. Hyperglycaemia b. Metabolic acidosis

c. Weight gain d. Decreased absorption of amino acids

174. Vit D is essential for normal

a. Fat absorption b. Ca absorption c. ADH secretion d.Protein absorption

175. Gastrin secretion is increased by

a. Acid in the lumen of stomach b. Distension of stomach

c. Increased circulating levels of secretin d. Vagotomy

176. In a health adult sitting with eyes closed the EEG rhythm observed with electrodes on occipital lobes

a. Alpha b. Theta c. Delta d. Beta

177. The basal ganglia are primarily concerned with

a. Sensory integration b. Short term memory

c. Control of movement d. Neuroendocrine control

178. Interruption of motor pathways in the internal capsule on one side causes

a. Spastic paralysis on the same side b. Spastic paralysis on the opposite side

c. Flaccid paralysis on the same side d. Flaccid paralysis on the opposite side

179. The extrapyramidal system is not concerned with

a. Stretch reflex b. Righting reflex c. Spasticity d. Sensation of viscera

180. Non fluent aphasia is produced by lesion of

a. Brocas area b. Angular gyrus c. Parietal lobe d. Frontal lobe

181. Thirst is stimulated by

a. increase in plasma osmolality and volume

b. increase in plasma osmolality and decrease in volume

c. decrease in osmolality and increase in volume

d. decrease in plasma osmolality and volume

182. Lesions of which of the following hypothalamic nuclei cause loss of circadian rhythm

a. Ventromedial b. Dorsomedial c. Suprachiasmatic d. Supraoptic

183. Normal blood flow to the brain is

a. Greatly modified by vasomotor control b. About 150ml/min

c. About 750ml/min d. Greatly increased during exercise

184. Retrograde amnesia

a. Is abolished by prefrontal lobectomy

b. Responds to drugs that block dopamine receptors

c. Is commonly precipitated by a blow on the head

d. Is commonly precipitated by ageing

185. A meal rich in proteins but low in carbohydrates does not cause hypoglycaemia because

a. Glucagon secretion is stimulated by meals

b. The meal causes compensatory increase in T4 secretion

c. Cortisol in circulation prevents glucose from entering the muscles

d. The amino acids in the meal are converted to glucose

186. Which of the following is incorrectly paired

a. Beta cells-insulin b. F cells- gastrin

c. Delta cells- somatostatin d. Alpha cells- glucagon

187. After intravenous administration of a large dose of insulin, the return of a low blood sugar level to Normal is delyed by

a. Thyrotoxicosis b. Glucagon deficiency

c. Diabetes d. Parathormone deficiency

188. Insulin increases entry of glucose into

a. Renal tubule b. The mucosa of the small intestine

c. Neurons of motor cortex d. Skeletal muscle cells

189. Glucagon is not normally found in the

a. Brain b. Pancreas c. Git d. Adrenal glands

190. Which of the following is NOT produced by physiological amounts of glucocorticoids

a. Maintenance of normal vascular reactivity b. Inhibition of inflammatory response

c. Increased excretion of a water load d. Inhibition of ACTH secretion

191. Cortisol increases blood glucose level by

a. Increasing lipolysis b. Increasing protein synthesis in muscles

c. Increasing gluconeogenesis d.Increasing growth hormone secretion

192. Epinephrine and norepinephrine

a. Are amino acids b. are both secreted by neurons in autonomic nervous system

c. Are polypeptides d. Both activate alpha and beta adrenergic receptors

193. A decrease in extracellular volume is expected to cause increased secretion of all except

a. Vasopressin b. Renin c. Thyroxin d. ACTH

194. Thyrocalcitonin

a. Is secreted by thyroid b. Is secreted by hypothalamus

c. Is secreted by parathyroid d. Increases Ca++ absorption by stomach

195. Which of the following is not involved in regulation of plasma Ca++ levels

a. kidneys b. skin c. lungs d. intestine

196. Ca++ plays an important role in following biological processes except

a. Oxygen utilization b. Contraction of cardiac muscle

c. Contraction of skeletal muscle d. Blood coagulation

197. Epiphyseal closure is regulated by

a. Calcitonin b. Somatomedins c. 1,25 dihydroxy cholecalciferol d. Thyroxine

198. Which of the following pituitary hormones is a polypeptide

a. MSH b. ACTh c. Beta – endorphin d. Growth hormone

199. Growth hormone acts directly on

a. Stimulation of protein synthesis b. Stimulation of cartilage formation

c. Elevation of BSL d. Stimulation of bone formation

200. Inhibin is secreted by

a. Graffian follicle b. Corpus leuteum c. Endometrium d. Placenta

ANSWER KEY

1	C	11	D	21	A	31	C	41	A	51	B	61	B	71	D	81	C	91	D
2	D	12	A	22	D	32	C	42	B	52	D	62	D	72	A	82	C	92	B
3	A	13	D	23	B	33	C	43	B	53	B	63	B	73	A	83	C	93	D
4	D	14	A	24	C	34	C	44	D	54	A	64	A	74	C	84	B	94	A
5	A	15	A	25	A	35	B	45	C	55	A	65	A	75	D	85	D	95	B
6	B	16	D	26	A	36	B	46	A	56	A	66	C	76	B	86	D	96	A
7	A	17	C	27	B	37	C	47	B	57	C	67	B	77	D	87	A	97	D
8	B	18	B	28	C	38	C	48	B	58	A	68	B	78	C	88	A	98	B
9	A	19	C	29	D	39	A	49	D	59	D	69	A	79	B	89	B	99	B
10	B	20	B	30	C	40	D	50	C	60	D	70	C	80	A	90	D	100	B

101,a	102,b	103,d	104,a	105,b	106,d	107,a	108,c	109,d	110,b
111,c	112,c	113,c	114,c	115,c	116,c	117,b	118,a	119,a	120,b
121,a	122,c	123,c	124,a	125,a	126,a	127,b	128,b	129,b	130,a
131,a	132,b	133,d	134,a	135,d	136,c	137,a	138,d	139,d	140,c
141,a	142,a	143,c	144,b	145,a	146,d	147,d	148,c	149,d	150,d
151,d	152,d	153,d	154,b	155,b	156,c	157,d	158,d	159,b	160,c
161,c	162,c	163,b	164,c	165,b	166,b	167,c	168,d	169,a	170.b
171,b	172,a	173,c	174,b	175,b	176,a	177,c	178,b	179,d	180,b
181,d	182,c	183,c	184,c	185,a	186,b	187,b	188,d	189,d	190,b
191,c	192,d	193,c	194,a	195,c	196,a	197,b	198,c	199,c	200,a

VETERINARY PATHOLOGY

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1. The possible outcome and severity of disease is called as

a. Lesion b. Symptom c. Prognosis d. Signs

2. The developmental process of disease is known as

a. etiology b. pathogenesis c. lesion d. response

3. Local death of cells or tissues in the living animal is known as

a. gangrene b. necrosis c. degeneration d. regeneration

4. Due to gravity, blood accumulated in the lower side of the body in dead animal is known

a. hyperemia b. ischemia c. hypostatic congestion d. anaemia

5. In coagulation necrosis, there is

a. loss of cellular details b. architecture is preserved c. a&b d. none

6. Liquefactive or Colliquative necrosis mainly occurs in

a. lung b. liver c. brain d. kidney

7. Macrophages laden with haemosiderin pigment is known as

a. gitter cells b. pus cells c. heart failure cells d. astrocytes

8. Collection and examination of tissue in the live animal is known as

a. autopsy b. necropsy c. biopsy d. necrosis

9. Proteins secreted by the lymphocytes on stimulation by an antigen is called as

a. lymphokines b. monokines c. cytokines d. interleukins

10. Histamine is secreted by an inflammatory cell

a. eosinophil b. basophils c. neutrophil d. monocytes

11. The cell which acts as the first line of cellular defence is

a. macrophages b. neutrophils c. eosinophils d. lymphocytes

12. Antibodies or immunoglobulins are produced by

a. lymphocytes b. monocytes c. macrophages d. plasma cells

13. Eosinophils are the inflammatory cells mostly seen in

a. parasitic infestations b. allergy c. skin diseases d. all of the above

14. When the suppurative inflammation involves the connective tissue diffusely, it is termed

a. cellulites b. abscess c. pus d. exudates

15. Small focal suppurative area in the hair follicle or sebaceous gland is known as

a. boils b. furuncle c. a&b d. none

16. In tuberculosis, the type of giant cells seen is

a. tumor giant cell b. foreign body giant cell c. langhan's giant cell d. none

17. Glycogen in the cells is demonstrated by using

a. PAS b. Best's caramine c. iodine d. all of the above

18. Mucin is stained blue colour by the stain

a. alcian blue b. methylene blue c. Haemotoxylin d. iodine

19. Decrease in the size of an organ or cells after it has attained its full normal growth is

a. atrophy b. hypertrophy c. metaplasia d. hyperplasia

20. Increase in the size of cells and thereby increase the size of the organ without disturbing architecture is known as

a. agenesis b. hypertrophy c. metaplasia d. hyperplasia

21. Complete failure of an organ or its part to form is known as

a. aplasia b. ageneis c. atrophy d. hypoplasia

22. An enlargement or increase in the size of tissue or organ due to increase in the number of constituent cells in response to stimuli is

a. hyperplasia b. hypertrophy c. atrophy d. hypoplasia

23. Hyperplasia and keratinisation of the skin epithelium occurs in the deficiency of

a. vitamin A b. vitamin K c. vitamin D d. thiamine

24. Increase in the size of the uterine musculature during pregnancy is a classical example of

a. physiologic hypertrophy b. compensatory hypertrophy

c. adaptive hypertrophy d. none of these

25. Continuous inactivity of a part of the body particularly muscles, results in

a. pressure atrophy b. disuse atrophy c. exhaustion atrophy d.physiologic atrophy

26. Programmed death of cells in a living animal is known as

a. necrosis b. apoptosis c. gangrene d. somatic death

27. ----- is one of the outcomes of necrosis, in which there is invasion of necrotic area by saprophytic organisms leading to putrefaction

a. calcification b. cell death c. gangrene d. apoptosis

28. Dry gangrene is usually seen in

a. intestines b. lungs c. extremities d. kidney

29. The best example of gas gangrene is

a. black quarter b. enterotoxaemia c. tetanus d. pulpy kidney disease

30. The deposition of calcium salts in the local area of tissue which is degenerated, dying or dead.

a. dystrophic calcification b. pathological calcification

c. metastatic calcification d. none

31. Metastatic or general calcification is deposition of calcium salts in many tissues in several organs due to increase in

a. blood phosphorus level b. blood calcium level

c. blood magnesium level d. none

32. Calcium slats in the tissues can be confirmed by using special stains such as

a. Von Kossa b. alizarine red S c. a&b d. none

33. Formation of osseous or bone tissue in any non osseous area is called as

a. pathological ossification b. bone formation c. calcification d. none

34. Cardinal signs of inflammation are

a. rubor, calor b. dalor, tumor c. function lasia d. all of the above

35. Menkin first identified a polypeptide, which had the property of increasing the vascular permeability

a. histamine b. kinins c. complement system d. prostaglandins

36. Inflammatory exudates has the property of

a. protein above 3% b. thick consistency c. specific gravity above 1.02 d. all

37. The inflammatory cells seen in the acute inflammation is

a. neutrophil b. lymphocytes c. plasma cells d. macrophages

38. The principal constituent of exudates is fibrin in

a. serous inflammation b. fibrinous inflammation

c. haemorrhagic inflammation d. none

39. Diphtheritic type of inflammation is seen in

a. calf diphtheria b. diphtheria c. staphylococcosis d. a&b

40. Lymphocytes predominantly seen in the inflammatory exudates in condition like

a. viral infection b. bacterial infection c. parasitic infection d. none

41. The branch of pathology that deals with the study of tumors or neoplastic growth is

a. clinical pathology b. oncology c. special pathology d. cancer

42. Anaplasia of cells and metastasis is the characteristic feature of

a. benign tumor b. malignant tumor c. a&b d. none

43. Benign tumour of smooth muscles is known as

a. rhabdomyoma b. leiomyoma c. leiomyosarcoma d. none

44. Cytological method commonly used in diagnosis of tumor is

a. haematoxylin and eosin method b. papanicolaou c. a&b d. none

45. The causes of disease is known as

a. lesions b. signs c. etiology d. prognosis

46. Prostate cancer results in elevated levels of blood

a. alkaline phosphatase b. acid phosphatase c. ALT d. AST

47. The causes which predisposes to the occurrence of disease is called as

a. intrinsic causes b. predisposing causes c. extrinsic causes d. a&b

48. The usual organ or site for the metastasis for the primary tumor is

a. lung b. liver c. kidney d. intestine

49. Chondromas are the benign tumor of

a. bone b. cartilage c. muscle d. adipose tissue

50. Melanomas are benign tumors, most commonly seen in

a. old dogs b. old grey horses c. a&b d. pig

51. Horn cancer affecting aged cattle in India, is a type of

a. basal cell carcinoma b. squamous cell carcinoma

c. papilloma d.sweat gland tumor

52. Sertoli cell tumor is male dogs is a

a. feminizing tumor b. masculinizing tumor c. a&b d. none

53. The tumor arising from serosal epithelium are called as

a. pulmonary adenomatosis b, mesothelioma c. meningioma d.cortical adenoma

54. The agents responsible for the disease primarily comes from outside the body is

a. intrinisic causes b. multifactorial causes c.unknown etiology d. extrinsic causes

55. Physical agents which causes the disease in animals are

a. trauma b. heat c. cold d. all of the above

56. Retrogressive changes in the tissue characterized by abnormal structural changes and decreased function is known as

a. regeneration b. degeneration c. necrosis d. none

57. Pus filled cavity formed by disintegration of tissue is called as

a. cellulites b. abscess c. exudates d. transudate

58. Septic bacteria in the blood is known as

a. septicemia b. toxaemia c. pyemia d. hyperemia

59. New and abnormal growth of tissue that is progressive and uncontrolled is called as

a. hyperplasia b. neoplasia c. dysplasia d. hypertrophy

60. Caseation necrosis develops in diseases such as

a. tuberculosis b. tularaemia c. a&b d. none

61. Cooling of the dead body immediately after death is known as

a. algor mortis b. rigor mortis c. livor mortis d. none

62. Stiffening and hardening of the muscles occurs 2-4 hours after death there by carcass become rigid is known as

a. algor mortis b. rigor mortis c. livor mortis d.postmortem change

63. Abnormal masses containing mineral salts that develop in organs as a result of accretion or inspissations of luminal contents is known as

a. cysts b. calculi c. a&b d. none

64. Who is called as father of cellular pathology?

a. Julius Cohnheim b. Metchnikoff c. Rudolf Virchow d. Celsus

65. The characteristic feature of chronic inflammation is

a. phagocytosis of debris by macrophages b. fibroblastic proliferation

c. absence of vascular changes d. all of the above

66. The hall mark of granulomatous inflammation which is a special type of chronic inflammation is formation of

a. giant cells b. epitheloid cells c. granulomas d. none

67. Light blue amorphous regions in the cytoplasm of toxic neutrophils are known as

a. Russell body b. dohle's body c. Mallory body d. basic protein

68. Increase in number of lymphocytes in blood circulation is known as

a. lymphophenia b. lymphocytosis c. lymphoma d. none

69. Self-assembling, extracellular system of proteins present in inactive form in plasma and body fluids is called as

a. C-reactive protein b. fibrinogen c. complement d. haptoglobulin

70. Tissues which are highly radiosensitive is

a. germinal cells b. muscle c. brain d. bone cells

71. An area of the ischemic necrosis in tissues or organs due to sudden or complete stoppage of blood flow in an end artery or venous drainage of affected area is called as

a. anaemia b. thrombosis c. edema d. infarction

72. In animal which is present as extensive abnormal development is known as

a. agenesis b. monster c. atresia d. fusion

73. ------ is wound in which there is tearing of tissues.

a. perforation b. laceration c. concussion d. sprain

74. The earliest morphologic evidence of cellular degeneration is

a. parenchymatous degeneration b. cloudy swelling

c. albuminous degeneration d. all of the above

75. Pathological epithelial hyaline is seen in prostate glands called as

a. hyperkeratosis b. corpora amylacae

c. zenker's degeneration d. white muscle disease

76. Mucoid degeneration may be seen in conditions like

a. myxoma b. myxedema c. malnutrition d. all of the above

77. Amyloid is stained red by

a. iodine b. congo red c. methyl violet d. none

78. ------- is a condition in which crystals of uric acid or urates of sodium and calcium are deposited in the tissues.

a. gout b. calcification c. ossification d. calculi

79. Normally, glycogen is present in

a. hepatic cells b. muscle fibers c. cervix uteri d. all of the above

80. ------- is a condition in which there is excessive accumulation fat in the fat depots occurs.

a. fatty degeneration b. fat necrosis c. obesity d. fatty change

81. During necrosis, the nucleus of the cell become smaller, rounded and condensed is

a. pyknosis b. karryorhexis c. karyolysis d. chromatolysis

82. The purpose of inflammation is to

a. destroy and remove the irritant b. repair the damaged tissue c. a&b d. none

83. The force which attracts the leucocytes into the inflamed tissues is called as

a. pavementation b. emigration c. chemotaxis d. diapedesis

84. When macrophages fuse together to form a large phagocytic cell, it is called as

a. pus cells b. giant cells c. gitter cells d. astrocytes

85. In birds, development of B-lymphocytes is dependent upon the

a. thymus b. liver c. bursa of fabricius d. none

86. Inflammatory exudates contains

a. irritant and injured tissue cells b. leucocytes

c. plasma constituents and erythrocytes d. all of the above

87. -------- is the process whereby the body restores the injured part to as near its previous normal condition as possible.

a. healing b. regeneration c. degeneration d. none

88. -------- is a condition in which increase in the size of the cells involved does not occur but the whole organ appears larger in size due to the increase in the some other tissue.

a. hypertrophy b. hyperplasia c. atrophy d. pseudohypertrophy

89. The tissue changes that occurs on excessive absorption of heat by the skin is known as

a. scalds b. burns c. heat stroke d. sun stroke

90. Dermatitis may be produced by the action of sunlight on certain photodynamic substances that may be present in the skin is known as

a. sensitization b. photosensitization c. frost bite d. none

91. A blue line is seen at the junction of the teeth and the gums in

a. mercury toxicity b. lead poisoning c. arsenic poisoning d. fluoride toxicity

92. Reversion to embryonic type, due to lack of differentiation through inadequate maturation of cells is known as

a. metaplasia b. dysplasia c. anaplasia d. hyperplasia

93. Bence Jones protein may be present in the urine in

a. multiple myeloma b. transmissible venereal tumor

c. sertoli cell tumor d. prostate cancer

94. The characteristic feature of skin cancers is formation of concentric layers of keratin is

a. pearls b. cell nests c. a&b d. none

95. Basal cell carcinoma is also known as

a. Jacob's ulcer b. rodent ulcer c. hair matrix carcinoma d. all of the above

96. --------- is a masculinizing tumor in female animals

a. dysgerminoma b. arrhenoblastoma c. granulosa cell tumor d. seminoma

97. Fat in the cells and tissues are usually stained by

a. osmic acid b. sudan III & IV c. oil red O d. all of the above

98. Presence of fat on the ventricular endocardium gives it a speckled appearance and it is called

a. fatty infiltration b. fatty degeneration c. thrush breast heart d. none

99. The branch of pathology used in the diagnosis of diseases in the hospital, at the patient's bed side is known as

a. nutritional pathology b. special pathology

c. chemical pathology d. clinical pathology

100. The alterations in structure, detectable macroscopically by naked eye or microscopically is known as

a. lesions b. symptoms c. diagnosis d. signs

101. In Xanthomas, the macrophages are laden with_____.

a. Glycogen b) Haemosiderin c) Cholestrol d) Fat.

102. To demonstrate glycogen, tissue must be preserved in the _____.

a. 10% formalin. b) formal saline. c) neutral buffered formalin. d) absolute alcohol

103. _____ pigment is referred as aging pigment.

a. melanin. b) Lipofuschin. c) haemosiderin. d) porphyrin.

104. _____ deposition is the important marker that indicates that cells suffered from free radical injury.

a) Lipofuschin b) melanin c) porphyrin d) haemosiderin

105. Heart failure cells are mainly present in the_____

a) lungs b) heart c) spleen d) Kidney

106. Discoloration of the skin with bilurubin occurs only when level rises above_____ in the serum or plasma.

a) 1mg/dl b) 0.5 mg/dl c) 5 mg/dl d) 2 mg/dl

107. Acanthosis nigricans, an increased amount of melanin within the skin is frequently observed in the_____

a) horse b) dog c) pig d) cattle

108. Biphasic type of Vanden Berg reaction is seen in _____.

a) Haemolytic Jaundice b) toxic Jaundice c) obstructive Jaundice d) all of above

109. Deposition of carbon particles in the lungs is referred as_____.

a) Silicosis b) siderosis c) anthracosis d) pneumoconiosis

110. _____ is the most common disturbance of cell metabolism and it is the first reaction of a cell to injury.

a) fatty change b) hydropic degeneration

c) mucinous degeneration d) albuminous degeneration.

111. Brain sand is a _____ type of hyaline change.

a) Keratohyaline b) cellular hyaline c) connective tissue hyaline d) None

112. The accumulation of _____ material in spleen gives lardaceous appearance.

a) amyloid b) hyaline c) lipofuschin d) haemosiderin

113. Amyloid deposition in the conjunctiva of _____ leads to blindness.

a) cattle b) horse c) cat d) puppies

114. Formation of the cytoplasmic blebs is seen in_____.

a) necrosis b) apoptosis c) both a&b d) none

115. Free radicals cause cell injury by

a) lipid peroxidation of the membrane b) cross linking of proteins

c) DNA fragmentation d) all of the above.

116. _____help in the proper folding of the proteins in their transport across the ER and golgi complex.

a) Chaperones b) heat shock proteins c) both a& b. d) C-reactive proteins.

117. Itching effect in the inflammation is produced by_____

a) bradykinnin b) histamine c) prostaglandins d) leukotrienes

118. _____ Scientist was first to describe vascular changes in the inflammation.

a) Julius Cohnheim b) Elie Metchinikoff c) Rudolf Virchow d) Claudius galen

119. Most chemical mediators of the inflammation cause an increase in vascular permeability only in_____

a) arterioles b) capillaries c) venules d) all of the above

120. Triple response in the inflammation was described by_____

a) Sir Thomas Lewis b) Julius Cohnheim c) Elie Metchinikoff d) Claudius Galen

121. Major basic protein mainly present in the_____

a) neutophills b) eosinophills c) basophills d) macrophages

122. The following are function as endogenous pyrogens, except_____

a) IL-1 b) IL- 6 c) TNF-α d) IL-2

123. In contrast to mammals, _____ play an important role in the avian inflammation.

a) Seotonin b) 5 HT c) both a&b d) Bradykinnin

124. Proud flesh refers to the_____

a) Inadequate formation of granulation tissue

b) Accumulation of excessive granulation tissue

c) Accumulation of excessive collagen

d) None of the above.

125. Wallerian degeneration is common in the_____

a) muscle b) bone c) cartilage d) nerves

126. Nutmug pattern of liver is seen in

a) Acute general passive hyperaemia. b) Chronic general passive hyperaemia.

c) Acute local passive hyperaemia . d) Chronic local passive hyperaemia

127. Brown induration of the lungs is common in the

a) Acute general passive hyperaemia. b) Chronic general passive hyperaemia.

c) Acute local passive hyperaemia . d) Chronic local passive hyperaemia

128. Hypostatic congestion is most common in the _____

a) lungs b) liver c) kidney d) intestine

129. The principal constituent of the purulent exudates is_____

a) serum b) plasma c) neurophills d) eosinophills.

130. Piliconcretions are made up of _____

a) plant b) polythene c) hairs d) desquamated cells

131. Choleliths may cause_____ jaundice.

a) toxic b) posthepatic c) prehepatic d) hemolytic

132. Primary granules of neutrophills contain_____

a) lactoferrin b) lysozyme c) myeloperoxidase d) lipase

133. Amyloid occurs in the body as a result of

a) immune complexes b) antigen c) antibody d) starch

134. Epithelial pearl is an example of_____ degeneration.

a) amyloid b) mucin c) hyaline d) cellular swelling

135. Presence of foreign material in blood vessels is known as_____

a) thrombus b) emboli c) Ischaemia d) infarction

136. Ketosis in cow may cause_____

a) hyaline degeneration b) fatty change c) amyloid degeneration d) fat necrosis

137. Cloudy swelling is characterized by the hazy cytoplasm due to swollen_____.

a) ER b) golgi bodies c) mitochondria d) nucleus

138. Partial loss of epithelium on skin or mucous membrane is known as_____

a) abrasion b) erosion c) laceration d) cotusion

139. Radiation affects the dividing cells of_____

a) ovary b) testes c) lymphocytes d) all of the above.

140. Transformation of one cell type to another cell type is known as_____

a) hyperplasia b) Dyspasia c) anaplasia d) metaplasia

141. Mesothelioma originates from mesothelium of

a) peritoneum b) pleura c) pericardium d) all of the above

142. Bence Jones proteins found in the urine with neoplasm of_____

a) multiple myeloma b) Hodgkins disease c) Bovine leukemia d) all of the above.

143. Most common testicular tumour in dogs is_____

a) seminoma b) sertoli cell tumour c) Leydig cell tumour d) both a& b.

144. Wilm's tumour is neoplasm of_____

a) gall bladder b) liver c) kidney d) lungs

145. In avian inflammation_____ cells are seen in abundance in comparison to mammals.

a) eosinophills b) basophills c) neutrophills d) none.

146. Fragmentation of the nucleus is referred as_____

a) karyolysis b) karyorrhexis c) chromatolysis d) pyknosis

147. Physiological cell death after completion of its function is known as_____

a) apoptosis b) necrosis c) necrobiosis d) cell death

148. Staining of tissue with haemoglobin after death of the animal is referred as____.

a) algor mortis b) livor mortis c) rigor mortis d) pseudomelonosis

149. Cells come out through break in blood vessels is referred as_____

a) diapedesis b) pavementation c) rhexis d) extravasation

150. Multinucleated cells having vacuolation in the cytoplasm due to increased lipid content is referred as_____

a) Foreign body giant cells
b) Langhn's giant cells
c) Tumour giant cell
d) Touton giant cell.

ANSWER KEY

1. c	26. b	51. b	76. d	101. c	126. b
2. b	27. d	52. a	77. b	102. d	127. b
3. b	28. c	53. b	78. a	103. b	128. a
4. c	29. a	54. d	79. d	104. a	129. c
5. c	30. a	55. d	80. c	105. a	130. c
6. c	31. b	56. b	81. a	106. d	131. b
7. c	32. a	57. b	82. c	107. b	132. c
8. c	33. a	58. a	83. c	108. b	133. a
9. a	34. d	59. b	84. b	109. c	134. c
10. b	35. a	60. a	85. c	110. d	135. b
11. b	36. d	61. a	86. d	111. b	136. b
12. d	37. a	62. b	87. a	112. a	137. c
13. d	38. b	63. b	88. d	113. b	138. b
14. a	39. d	64. c	89. d	114. b	139. d
15. b	40. a	65. d	90. b	115. d	140. d
16. c	41. b	66. b	91. b	116. c	141. d
17. d	42. b	67. b	92. c	117. b	142. a
18. a	43. b	68. b	93. a	118. a	143. c
19. a	44. c	69. c	94. c	119. c	144. c
20. b	45. c	70. a	95. b	120. a	145. b
21. b	46. b	71. d	96. d	121. b	146. b
22. a	47. b	72. b	97. d	122. d	147. c
23. a	48. a	73. b	98. a	123. c	148. b
24. a	49. b	74. d	99. d	124. b	149. c
25. b	50. a	75. b	100. a	125. d	150. d

VETERINARY PHARMACOLOGY & TOXICOLOGY

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1. The very purpose of metabolism of drugs in the body is to render them:

A. Functionally inactive B. Water soluble

C. Lipid soluble D. Neutral compound

2. A more gradual decrease in response to drugs taking days or weeks to develop is called:

A. Drug resistance B. Tachyphylaxis C. Desensitization D. Tolerance

3. The anti-inflammatory effects of meloxicam is due to its ability to inhibit:

A. Preferentially COX_1 B.Preferentially COX_2

C. COX_1 & COX_2 equipotently D. Lipooxygenase (LOX)

4. The 'time lag' for the drug to fall one-half of the original concentration in plasma is called:

A. Bioavailability (F) B. Duration of action (T_d)

C. Half-life ($t_{1/2ß}$) D. Clearance (Cl_B)

5. The bactericidal action of cephalosporin group of antibiotics involves inhibition of:

A. Cell wall synthesis B. DNA replication

C. Ion transport D. Protein synthesis

6. 'Arthropathy' is one of the major side effects observed with:

A. Sulphonamides B. Fluoroquinolones

C. Macrolids D. Aminoglycosides

7. The receptors for steroid hormones are located in:

A. Plasma membrane B. Cytoplasm

C. Mitochondria D. Smooth endoplasmic reticulum

8. Previously identified endothelium derived relaxing factor (EDRF) is currently known as:

A. Endothelin B. Platelet activating factor (PAF)

C. Nitric oxide (NO) D. Eicosanoids

9. Acetylcholinesterase (AChE) enzyme is relatively rich in the venom of:

A. Russell's viper B. Cobra C. Common krait D. Pit vipers

10. The toxalbumin present in castor bean is:

A. Mimosine B. Strychnine C. Ricin D. Hyoscine

11. The principal and ubiquitous excitatory amino acid neurotransmitter in the CNS is:

A. L-glutamate B. Gama-amino butyric acid(GABA) C. D-serine D. Glycine

12. A non-steroidal compound with anti-estrogenic effect is:

A. Finasteride B. Tamoxifen citrate C. Diethyl stilbioestrol D. Flutamide

13. One among the following is a most potent reactive oxygen species (ROS):

A. H_2O_2 B. O^- C. OH^- D. NO

14. One of the following is a proton pump (H^+) blocker prescribed in gastric ulcer:

A. Omeprazole B. Metaclopramide C. Mesoprostol D. Sucralfate

15. A macrolide compound contraindicated in *Collie* and its cross bred dogs:

A. Praziquantel B. Levamisole C. Closantel D. Ivermectin

16. All but not one of the following is a chelating agent:

A. British anti-Lewisite B. Desferroxamine

C. Calcium di-sodium EDTA D. 2-PAM

17. The bactericidal action of one of the following is described as 'time dependent':

A. Enrofloxacin B. Penicillin-G C. Streptomycin D. Metronidazole

18. The 'cherry red' colour of blood observed in cyanide poisoning is due to:

A. Haemolytic crisis B. Hyperoxygenation of blood

C. Methaemoglobenemia D. Carboxyhaemoglobin

19. A competitive antagonist of benzodiazepine receptor:

A. 4-aminopyridine B. Gabapentin C. Yohimbine D. Flumazenil

20. L -type calcium channel blocker used to prevent supraventricular tachycardia:

A. Quinidine B. Amlodipine C. Captopril D. Amrinone

21. Glucuronide formation, a mechanism of drug detoxification process is poor in:

A. Dogs B. Pigs C. Cats D. Cattle

22. Sialic acid content in glycoprotein hormones determines its:

A. Biological activity B. Receptor binding C. Half-life D. *in vitro* stability

23. Transfer of drug resistance genes between genetic elements within the bacterium is called:

A. Plasmid B. Transposons C. Transduction D. Conjugation

24. An active principle present in *rhizomes* of turmeric plant:

A. Piperine B. Azadirachtin C. Curcumin D. Quercetin

25. More than fifty percent of drugs undergoes metabolism through:

A. CYP 1A1 B. CYP 3A4 C. CYP2D6 D. CYP 2C9

26. DNA-dependent RNA polymerase in prokaryotic cells can be inhibited by:

A. Isoniazid B. Tylosin C. Rifampicin D. Oseltamivir

27. The mathematical description of changes in concentration of drugs or their metabolites in body is called:

A. Pharmacometrics B. Pharamcokinetics

C. Chronopharmacology D. Pharmacodynamics

28. Carbon tetrachloride is primarily a:

A. Neurotoxicant B. Nephrotoxicant C. Haematotoxicant D. Hepatotoxicant

29. One of the following is a pyrethroid compound:

A. Parathion B. Warfarin C. Cypermethrin D. Endosulfon

30. A food preservative commonly employed in commercial pet foods:

A. Salicylic acid B. Boric acid

C. Monosodium glutamate (MSG) D. Benzoic acid

ANSWER KEY

Question Number	Answer	Question Number	Answer
1	B	25	B
2	D	26	C
3	B	27	B
4	C	28	D
5	A	29	C
6	B	30	D
7	B		
8	C		
9	B		
10	C		
11	A		
12	B		
13	C		
14	A		
15	D		
16	D		
17	B		
18	B		
19	D		
20	B		
21	C		
22	C		
23	B		
24	C		

1. The pharmacological response to drug(s) acting through nuclear receptors normally occurs:
   a. within milliseconds b. within minutes
   c. after a booster dose d. after a day or week
2. A drug interacting with receptor(s) but does not elicit the response is called:
   a. agonist b. orphan drug c. antagonist d. placebo
3. Unusual response to a drug due to genetical reasons occurring rarely in a population is:
   a. allergy b. idiosyncrasy c. toxicity d. tachyphylaxis
4. The pre-systemic metabolism of drug(s) before reaching systemic circulation is called:
   a. first-pass effect b. lethal synthesis
   c. functional metabolism d. synthetic metabolism
5. The mechanism of fluoroquinolones involves inhibition of synthesis of:
   a. cell wall b. nucleic acid c. protein d. lipopolyscharides
6. The blood-brain barrier of *Collie* and its cross bred dogs are deficient in:
   a. G-protein b. astrocytes c. P-*gp* protein d. Bcl -protein
7. The receptors for glycoprotein hormones are located in:
   a. plasma membranes b. nucleus c. mitochondria d. EPR
8. One among the following is a most potent reactive oxygen species (ROS):
   a. NO b. $O^{\cdot -}$ c. OH^{-} d. H_2O_2
9. Death due to cobra envenomation is due to:
   a. acute nephrosis b. haemolysis c. respiratory arrest d. hypotension
10. If therapeutic index of a given drug (X) =8, then it mean the drug 'X' is:
   a. extremely unsafe b. relatively safe c. extremely safe d. harmless
11. Prostaglandins (PGs) are essentially metabolized in:
   a. kidney b.plasma c. liver d. lungs
12. The analgesic effects of 'OPIOIDs' are mediated *via*:
   a.'μ' receptors b. 'ß'receptors c. 'delta' receptors d. 'M' receptors
13. One among these prevents the release of acetylcholine (ACh) at neuromuscular junction:
   a. chlorpromazine b. strychnine c. botulinum d. nicotine
14. The colour of the blood in cyanide toxicity is:
   a. chocolate brown b. cherry red c. blackish d. dark green
15. An example for NMDA receptor antagonist:
   a. xyalzine b. diazepam c. tremadol d. ketamine

16. The most susceptible species for salt toxicity are:

a. ovines & caprines b. felines & poultry c. canines & felines d. swine & poultry

17. One among these therapeutic agents inhibits *cytochrome*- P_{450} drug metabolic enzymes:

a. amoxicillin b. amikacin c. ketoconazole d. levamisole

18. The drug of choice for treating acute nitrite toxicity in farm animals:

a. sodium thiosulfate b. methylene blue c. trypan blue d. calcium sodium EDTA

19. Epinephrine is a:

a. mixed agonist b. alpha- agonist c. beta-agonist d. inverse agonist

20. The mechanism of action of amlodipine involves:

a. inhibition of *L*-type Ca^{+2} channels b. inhibition of *N*-type Ca^{+2} channels

c. blockade of Ca^{+2}- K^{+} ATP*ase* d. activation of K^{+} -channel

21. Drug metabolism in fish essentially occurs in:

a. muscles b. kidney c. gills d. skin

22. The biological half-life of glycoprotein hormone(s) is primarily determined by its:

a. molecular weight b. sialic acid content c. tyrosine content d. Sulphydryl bonds

23. Transfer of antibiotic resistance between the bacterium through '*pilus*' formation' is

a. conjugation b. transduction c. transformation d. transposons

24. Variations in drug response due to individual lifestyle are dealt under:

a. pharmacometrics b. chronopharmacology c. pharamcokinetics

d. pharamcogenetics

25. Relatively a COX_1- specific non-steroidal anti-inflammatory agent:

a. nemesulide b. meloxicam c. aspirin d. rofecoxib

ANSWER KEY

Question Number	Answer	Question Number	Answer	Question Number	Answer
1	D	12	a	23	a
2	C	13	c	24	d
3	B	14	b	25	c
4	A	15	d		
5	B	16	d		
6	C	17	c		
7	A	18	b		
8	C	19	a		
9	C	20	a		
10	B	21	b		
11	D	22	b		

VETERINARY PHARMACOLOGY AND TOXICOLOGY

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1. The antibiotic with high degree of photosensitivity is

   a. tetracycline b. gentamicin c. ampicillin d. ceftizoxime

2. Drug of choice for treatment of methicillin resistant *Staphylococcus aureus*

   a. ceftriaxone b. vancomycin c. piperacillin d. amoxicillin

3. Mechanism of action of aspirin is by inhibiting

   a. Thromboxane A_2 synthase b. Phosphodiesterase

   c. hmG- CoA reductase d. phospholipase A_2

4. Lignocaine acts by

   a. blocking sodium channel b. Inhibiting magnesium channel

   c. stimulating sodium channel d. blocking calcium channel

5. 'Grey baby syndrome' is the adverse effect of

   a. chloramphenicol b. cycloserine c. kanamycin d. oxytetracycline

6. Cefixime is classified under

   a. Second generation short acting cephalosporins

   b. Third generation long acting cephalosporins

   c. Second generation parenteral cephalosporins

   d. Fourth generation parenteral cephalosporins

7. Drug of choice for trichomoniasis in cattle

   a. ampicillin b. metronidazole c. ciprofloxacin d. oxytetracycline

8. Which of the following is a prodrug?

   a. enalapril b. dopamine c. ampicillin d. prednisolone

9. Point out the wrong statement, with regard to the action of insulin

   a. In liver, insulin increases glycogenesis

   b. It is a polypeptide hormone with A and B chains

   c. its action is anabolic and increases glucose storage.

   d. It facilitates glucose entry into red blood cells

10. Antagonist of warfarin is

    a. protamine sulfate b. clopidogrel c. phytomenadione d. ethamsylate

11. Drug used in the therapeutic management of benign prostatic hyperplasia in geriatric dogs is

a. nifedipine b. clonidine c. glycopyrrolate d. finasteride

12. Which of the following substances is most likely to cause systemic alkalosis?

a. sodium bicarbonate b. methylcellulose

c.sodium phosphate d.castor oil

13.Drug which exerts anti-peptic ulcer effects through inhibition of proton pump

a.sucralfate b.ranitidine c.lansoprazole d.misoprostol

14. A laxative which promotes defecation without increasing peristalsis is:

a. castor oil b. docusate sodium c.phenolphthalein d.cascara

15. The drug of choice against *Ehrlichia canis* organism is

a.ciprofloxacin b. azithromycin. c. doxycycline d. lincomycin

16. The prophylactic agent effective against 'avian influenza' virus is

a. indinavir b. nevirapine c. oseltamivir d. saquinavir

17. The most sensitive species of animal for monensin sodium toxicity is

a. bovines b. equines c. poultry d. Porcines

18. The antitrematodal anthelmintic among these is

a. praziquantel b. closantel c. pyrantel pamoate d. Fenbendazole

19. Stanozolol is

a. haemostatic b. An antiemetic c. An appetite stimulant d. Diuretic

20. One of the following statement is true with reference to effects of dexamethasone sodium phosphate in animals ?

a. decreased gluconeogenesis and reduced lipolysis

b inhibit the activity of kinins and bacterial endotoxins

c stimulate bone formation by stimulating osteoblast proliferation

d. increased protein synthesis

21. One of the following statements is correct with respect to action of antibiotics on bacterial protein synthesis

a. chloramphenicol inhibits peptidyl transferase

b. streptomycin inhibits transpeptidation

c. erythromycin inhibits 30S ribosomal activity

d. lincomycin inhibits the formation of initiation complex

22. Point out the correct one , with relation to their pharmacological properties

a. ceftriaxone : concentration dependent antibiotic b. glipizide : hyperglycaemic

c. tetracyclines : milk residue d. dinoprost : luteotrophic

23. The antibacterial agent effective against *Mycobacterium bovis* is

a. streptomycin b. tinidazole c. tylosin d. tiamulin

24. Nosocomial infections are

a. physician induced b. hospital acquired

c. genetically acquired d. drug overdosage related

25. Concurrent administration of Fluoroquinolones may reduce the hepatic clearance of

a. NSAIDS b. methylxanthines c.penicillins d. antispasmodics

26. The purpose of using clavulanic acid in combination with amoxicillin is to

a. delay the excretion of amoxicliin b. inhibit the beta lactamase

c. enhance the spectrum of clavulanic acid d. to delay the absorption of amoxicillin

27. The agent used for dealying the excretion of ampicillin is

a. probenecid b. diaminopyrimidine c. sulbactam d. tazobactam

28. The antithielerial compound among these is

a. suramin b. quinapyramine sulphate c. halofuginine lactate d. trypan blue

29. The mechanism of bacterial resistance of removing the antibiotic from its site of action before it can act is by

a. enzymatic degradation b. active efflux pupmps

c. changing the metabolic pathway d. development of mutation

30. The compounds derived from *chrysanthemum cinerariaefolium* plant have

a. anticancerous property b. antinematodal action

c. antidiarrhoeal action d. ectoparasiticidal action

31. The agent used as growth promoter in pigs is

a. nitrofurantoin b. carbadox c. novobiocin d. Erythromycin

32. Sequential double blockade' is the term associated with the action of

a. cyclophosphamide b. chlortetracycline c. Sulphamethoxazole d. quinapyramine

33. One of these agents is nonteratogenic and nonabortifacient

a. fenbendazole b. tamoxifen citrate c. cloprostenol d. albendazole

34. Point out the correct statement

a. chloramphenicol inhibits bacterial 30 S ribosomal subunit

b. d-cycloserine inhibits bacterial cell wall transpeptidation

c. kanamycin is a concentration dependent antibiotic

d. the antibacterial spectrum of gentamicin is : broad spectrum anaerobic

35. Amitraz is classified under

a.organochlorines b.organophosphates c. pyretrhroids d. formamidines

36. The clinical indication of medroxy progesterone acetate in bitches is for

a. mismating b.induction of oestrus

c. postponement of oestrus d. delayed ovulation

37. The base used in the oxytetracycline dihydrate salt injectable solution is

a. propylene glycol b. sodium bisulphite

c. polyvinylpyrrolidone d. chlorcresol

38. Point out the correct statement

a. taxol acts on M phase of cell cycle

b. vincristin acts on G_1 phase of cell cycle

c. diaminopyrimidines stimulate dihydrofolate reductase

d. tacrolimus is a immunostimulant

39. The antimicrobial agent effective aginst toxoplasma organism is

a. clarithromycin b. Norfloxacin c. doxycyline d. primaquine

40. Which one of the following statement is correct with reference to amikacin?

a. It is an aminocyclitol

b. It is ineffective against *Pesudomonas aeruginosa*

c. It is a semisynthetic derivative of kanamycin

d. It is effective against gram negative anaerobes

41. An example for synergistic antibacterial combination is

a. chloramphenicol + ampicillin b. tetracycline + fluororquinolone

c. tylosin + lincomycin d. cefazolin + gentamicin

42. The synthetic $PGF_{2\alpha}$ analoge used for the luteolytic property in cattle is

a. buserelin b. dinoprost tromethamine c. hexestrol d. cloprostenol

43. The drug of choice for *nasal schistosomiasis* in cattle is

a. carbontetrachloride b. praziquantel c. levamisole d. Diethylcarbamazine

44. Long term therapy of enrofloxacin in adult cats result in

a. liver failure b. lameness c. gastroenteritis d. Blindness

45. The usage of broad spectrum antibacterials may result in

a. super infections b. iatrogenic infections

c. nosocomial infections d. subclinical infections

46. The cholinomimetic alkaloid used for its anticestodal action is

a. pilocarpine b. muscarine c. arecholine d. neostigmine

47. Selective cyclooxygenase 3 inhibitor among these is

a. meloxicam b. aspirin c. acetaminophen d. phenyl butazone

48. Chance of gastrointestinal ulcer formation will be more with the inhibition of

a. lipooxygenase b. cycloxygenase 1 c. cyclooxygenase 2 d. cyclooxygenase 3

49. Lisinopril acts by

a. antagonizing calcium channels b. antagonizing potassium channels

c. inhibiting angiotensin II formation d. inhibiting angiotensin III formation

50. The diuretic preferred for reducing the intra cranial pressure is

a. frusemide b. ethacrynic acid c. acetazolamide d. mannitol

51. An example for an agent which cause relaxation of uterus is

a. Oxytocin b. Tiaprost c. isoxsuprine d. phenoxybenzamine

52. The appetite stimulant used in cats , with the antiserotonergic properties is

a. thiamine HCl b. stanozolol

c. medroxyprogesterone d. cyprohepatdine HCl

53. Neostigmine is indicated in

a. ruminal atony b. diarrhoea c. Bronchoconstriction d. miosis

54. The most important adverse effect of pefloxacin in young dogs is

a. bone marrow depression b. chondrotoxicity c. anaphylaxis d. ototoxicity

55 . One of the following is a non sedative antihistaminic

a. terbinafine b. terfenadine c. hydroxyzine d. buclizine

56. The auto inhibitory receptors regulating the acetyl choline release in neuroeffector junction of parasympathetic nervous system are

a. M_1 b. M_2 c. N_n d. M_3

57 .The vasodilatation effect of cholinergic agonists is due to

a. nitrous oxide b. nitric oxide c. cAMP d. reflex tachycardia

58. An example for the dopamine agonist is

a. domperidone b. droperidol c. bromocriptine d. acepromazine

59. The drug used for the prevention and treatment of gastrointestinal ulcers among these is

a. terfenadine b. nizatidine c. azatadine d. sodium carbonate

60. The parasympatholytic agent used for the opthalmological examinations is

a. pilocarpine b. scopalamine c. cyclopentolate d. ephedrine

61. The action of cardiac glycosides is to

a. inhibit $Na^+ K^+$ ATPase b. Inhibit $H^+ K^+$ ATPase

c. stimulate $H^+ K^+$ ATPase d. stimulate $Na^+ K^+$ ATPase

62. Depolarizing neuromuscular blocking drug used for skeletal muscle relaxation is

a. d-tubocurarine b. suxamethonium c. vancuronium d. gallamine

63. The effect of dobutamine on heart is

a. increased force of contraction b. increased heart rate

c. increased conduction of impulses d. decreased conduction of impulses

64. Protamine sulphate is a

a. warfarin antagonist b. heparin antagonist

c. fibrinolytic agent d. Antiplatelet drug

65. The pharmacological effect of acetaminophen is

a. PG synthesis b. analgesic c. anti-inflammatory d. Antiplatelet

66. Phosphodiesterase inhibitor among these is

a. salbutamol b. theophylline c. isoxsuprine d. terbutaline

67. The preanesthetic agent commonly used to block the vagal reflexes is

a. propranolol b. scopolamine c. glycopyrrolate d. digoxin

68. Ketamine is a

a. local anaestehtic b. general anaestehtic

c. inhalational anesthetic d. dissociative anaesthetic

69. The route of drug administration contraindicated in weak dehydrated patients is

a. intraperitoneal b. intramuscular c. subcutaneous d. oral

70. The plant rich in cyanogenic glycosides is

a. cotton plant b. lucerne c. tapioca d. poppy plant

71. Yohimbine HCl is indicated in the overdosage of

a. diazepam b. ketamine c. acepromazine d. detomidine

72. The analgesic indicated for nerve blocks during head injuries is

a. pethidine b. methimazole c. bupivacaine d.sodium salicyalte

73. Selegiline is a

a. monoamine oxidase inhibitor b. selective serotonin reuptake inhibitor

c. tricyclic antidepressant d. anticonvulsant

74. The antidote for nitrate toxicity in cattle is

a. methylene blue b. sodium thiosulphate

c. calcium disodium EDTA d. desferroxamine

75. Cobra venom is relatively rich in

a. phospholipase b. pseudocholinesterase

c. acetylcholinesterase d. thrombin like enzymes

76. The toxic principle present in castor bean is

a. gossypol b. abrin c. ricin d. sanguinin

77. An example for combination of agents inducing neurolept analgesia in animals is

a. droperidol and fentanyl citrate b. acepromazine and haloperidol

c. triflupromazine and fluanisone d. chlorpromazine and ketamine

78. The solid medicated preparations meant for introduction in to the vagina are termed as

a. suppositories b. poultice c. pessaries d. mucilages

79. The antiemetic agent preferred for controlling the chemotherapy induced nausea and

vomition is

a. domperidone b. buclizine c. granisetron d. Metoclopramide

80. The antiemetic agent preferred for controlling the motion sickness in animals is

a. promethazine b. pheneramine maleate

c. granisetron d. sodium bicarbonate

81. The antibacterial indiacated in the treatment of bacterial meningitis is

a. azithromycin b. lincomycin c. ceftizoxime d. gentamicin

82. The gastrokinetic agent indicated for relieving free gas bloat condition in ruminants

a. domperidone b. maropitant c. manganese sulphate d. metoclopramide

83. The effect of metformin is

a. increased blood glucose level b. increased insulin release

c. reduced insulin release d. reduced blood glucose levels

84. The mechanism of action of enrofloxacin involves

a. Inhibition of topoisomearse b. inhibition of xylose isomerase

c. inhibition of cell wall synthesis d. inhibition of protein synthesis

85. The antidote for propoxur toxicity is

a. pralidoxime b. atropine sulphate c. diacetyl monoxime d. thiamineHCl

86. The chemical constituent commonly found in the commercially available mosquito repellants is

a. parathion b. allethrin c. amitraz d. bromadiolone

87. Hypokalemia is an adverse effect of

a. ethacrynic acid b. spironolactone

c .chlorpheneramine maleate d. ranitidine

88. The branch of pharmacology that deals with the study of sources of drugs is

a. pharmacy b. pharmacovigilance c. pharmacognosy d.posology

89. An example for the opioid analgesic with little effect on CNS is

a. meperidine b. etorphine c. tramadol d. pentazocine

90. The opioid compound used in combination with atropine sulphate in non infectious diarrhea is

a. dicaetyl morphine b. pethidine c. loperamide d. diphenoxylate

91. Epinephrine is indicated in

a. hypertension b. allergy c. anaphylaxis d. asthma

92. GABA is the target for the action of

a. phenothiazinee b. levamisole c. selamectin d. closantel

93. Haemocoagulant among these is

a. streptokinase b. dicoumarol c. ethamsylate d. Ferrous sulpahte

94. Oxalate rich plant among these is

a. *Lantana camara* b. *Parthenium hysterophorus*

c. *Hypericum perforatum* d. *Beta vulgaris*

95. Sui poisoning is caused by

a. *Acacia leucophloea* b. *Abrus precatorius*

c. *Argemone mexicana* d. *Areca catechu*

96. Epsom salt has the pharmacological action of

a. antidiarrhoeal b. bronchodilator c. purgative d. adsorbent

97. The antidote for diazepam overdosage is

a. adrenaline b. dexametahsone c. flumazenil d. sodium lactae

98. Urinary alkalisers are used during the therapy with

a. clindamycin hydrochloride b. tylosin hydrochloride

c. cefotaxime sodium d. sulfamethoxazoel

99. Lufenuron is effective against

a. adult flies b. immature ticks c. immature fleas d. adult mites

100. Antiarrythmic drug among the following is

a. amrinone b. lidocaine c. quinoronium d. primidone

101. The diuretic which acts by antagonizing aldosterone is

a. frusemide b. lamiloride c. spironolactone d. chlorothiazide

102. Vincristin sulphate is

a. an anticanerous antibiotic b. administered intramuscularly

c. cytotoxic drug d. an inhibitor of macrotubules

103. The topical agent of choice against *Candida albicans* is

a. sodium iodide b. caspofungin c. clotrimazole d. cotrimoxazole

104. An example of drug undergoing 'acetylation' bitransformation reaction

a. meloxicam b. Ampicillin c. paracetamol d. sulphadimidine

105. Dimercaptosuccinic acid is the chelating agent for

a. copper b. selenium c. iron d. lead

106. Milk of magnesia is

a. used to neutralize ingested acids b. Used to neutralize ingested alkalies

c. the detoxicant of choice for molybdenum toxicosis

d. used for arsenic toxciosis

107. The treatment of cyanide poisoning involves combination of

a. sodium nitrate and sodium sulfate

b. Calcim EDTA and sodium bicarbonate

c. sodium thiosulfate and hydroxycobalamine

d. sodium sulfate and sodium nitrite

108. Chocolates are toxic to dogs due to the presence of

a. aminophyllne b. terbutaline c. theobromine d. pheneramine

109. The currently veterinary approved nonsteroidal antiinflammtory drug in dogs is

a. celecoxib b. etodolac c. carprofen d. ketorolac

110. Cats are highly sensitive to the toxicity of

a. pyrethroids b. carbamates c. phenols d. macrolides

111. The teratogenic agent among these is

a. fenbendazole b. penicillin G c. ketoconazole d. levamisole

112.The antimicrobial action of one of the following antibiotics is described as 'time dependent'

a. streptomycin b. Enrofloxacin c. amoxycillin d. gentamicin

113. 1 % W/V solution of ivermectin injection contains

a. 1g of ivermectin in 1 litre solution b. 1mg of ivermectin 100ml solution

c. 1 mg of ivermectin in 1 ml solution d. 0.001 g of ivermectin in 1 ml solution

114. The therapeutic value of *Allium satium* is *as*

a. antidiarrhoeal b. antibacterial *c.* purgative d. demulcent

115. An example for pharmacokinetic incompatibility is

a. fluroquinolones with penicillins b. aminoglycodsides with penicillin

c. chloramphenicol with barbiturates d. NSAIDS with macrolides

116. The semi solid preparation with treacle or jaggery as the base and are intended to be Smeared on the back of the tongue or hard palate of animals are

a. elixirs b. boluses c. electuaries d. emulsions

117. The immunomodulatory anthelmintic among these is

a. morantel citrate b. levamisole hydrochloride

c. tetramisole d. moxidectin

118. Longest acting penicillin among these is

a. benzyl penicillin b. procaine penicillin

c. benzathine penicillin d. piperacillin

119. A potent microsomal enzyme inhibitor among these is

a. apramycin b. ciprofloxacin c. chloramphenicol d. azithromycin

120. 10 mg of crystalline standard benzyl penicillinG sodium is equal to

a. 1667 International units b. 16670 International units

c. 16.67 International units d. 166.7 International units

121. . One of the following is effective against liverflukes in ruminants

a. piperazine b. triclabendazole

c.niclosamide d. antimony potassium tartrate

122. 'Universal antidote ' consists of of activated charcoal, magnesium oxide and

a. egg white b. milk c. tannins d. liquid paraffin

123. The toxicity of copper in animals is enhanced by the low dietary levels of

a. manganese b. iron c. magnesium d. molybdenum

124. Point out the correct statement

a. the toxicity of nitrate ion is more than that of the nitrite ion

b. soil deficient in phosphorous enhance nitrate intake by plants.

c. . sodium nitrate converts haemoglobin to methaemoglobin

d. diet rich in readily fermentable carbohydrates increases nitrite production in ruminants

125. Mottling and patchy loss of dentine appearance of teeth is observed due to toxicity of

a. copper b. zinc c. fluoride d. iron

126. The measure of margin of safety of a drug is obtained by

a. LD_{50}/ ED_{99} b. LD_{1}/ ED_{99} c. ED_{50}/ LD_{50} d. LD_{50}/ ED_{50}

127. First pass effect for most of the drugs occurs in

a. tongue b. intestines c. rectum d. oral mucosa

128. An example for ' lethal synthesis'; is the conversion of

a. codeine to morphine b. parathion to paraoxon

c. phenylbutazone to oxtphenbutazone d. vitamin K to vitamin K epoxide

129. Area under the curve (AUC) denotes the value of

a. volume of distribution of the drug b. bioavailability of the drug

c. half life of the drug d.maximum plasma concentration of the drug

130. Doxapram is a

a. analeptic agent b. antiepileptic drug c. muscle relaxant d. cataleptic agent

131. The drug preferred in the management of low cardiac output shock is

a. isoprenaline b. adrenaline c. nor adrenaline d. dobutamine

132. Non sedative antitussive among these is

a. codeine b. dihydrocodeine c. dextromethorphan d. diamorphine

133. The antiseptic with antifungal action is

a. benzoyl peroxide b. povidone iodine

c. Cetrimide d.potassium permanganate

134. Lindane toxicity is treated by the administration of

a. dimercaprol b. d-penicillamine c. phenobarbitone d. scopolamine

135. Antimycoplasmal antibiotic among these is

a. tiamulin b. doxycyline c. chloramphenicol d. vancomycin

136. The spectrum of antibacterial activity of first generation cephalosporins is primarily against

a. gram negative anaerobes b. gram positive anaerobes

c. gram positive aerobes d. Mycobacterium spp.

137. Drug of choice for prevention of canine heart worm infestation is

a. piperazine b. milbemycine c. niclosamide d. praziquantel

138. A novel sodium channel blocker for use in dogs as a fleacide is

a. lufenuron b. metaflumizone c.gamma benzene hexachloride d. carbaryl

139. One of the following is an antihypertensive agent with vasodilator action

a. dopamine b. glyceryl trinitrate c. reserpine d. alpha methyl dopa

140. Glyceryl guaicolate is a

a. general anaestehtic b. peripheral l muscle relaxant

c.preanaesthetic d. narcotic analgesic

141. The pure antagonist for pethidine overdosage is

a. pentazocine b. naltrexone c. methadone d. etorphine

142. Injectable general anesthetic among these is

a. ketamine b. diazepam c. propofol d. acepromazine

143. Malignant hyperthermia condition in pigs may be observed with

a. ether b. enflurane c. halothane d. thiopentone

144. The adverse effect of anticancerous drugs is

a. constipation b. bleeding c. lameness d. convulsions

145. Topically used sulfonamide for ophthalmic infections is

a. sulfadiazine b. sulphathiazole c. sulphacetamide d. sulphapyridine

146. Third generation cephalosporin among these is

a. ceftiofur b. cefazolin c. cefadroxil d. ceefpime

147. The mechanism of action of benzimidazole class of anthelmintics is by

a. inhibition of glycolysis b.muscle hyperpolarisation

c. inhibition of fumarate reductase d. inhibition of phosphorylation

148. The coccidiocidal drug used in turkey is

a. clopidol b. diclazuril c. Salinomycin d. Enrofloxacin

149. Bitter almond smell of the gastrointestinal contents is observed in

a. phosphorous poisoning b. selenium poisoning

c. cyanide poisoning d. mercury poisoning

150. The action of 2- pralidoxime is to

a. inhibit the acetyl cholinesterase enzyme

b. activate the acetyl cholinesterase enzyme

c. inhibit acetylcholine breakdown

d. activate acetyl choline synthesis

151. The antidote for paracetomol toxicity in cats is

a)N- methylGlycine b) N-acetylcysteine

c) N-acetylmethionine d) N-methylguanine

152. Zearalenone is a:

a) Steroidal estrogenic b) phytoestrogen

c) Steroidal antiestrogen d) non -steroidal estrogenic

153. One of the following organochlorine is least soluble in body fat:

a) lindane b) DDT c) methoxychlor d) dieldrin

154. Coolie breeds of dogs are hypersensitive to

a) Albendazole b) Ivermectin c) Both d) None

155. Indian pharmacopoeia published every

a) 1 year b)2 years c) 5 years d) none

156. Drugs with very high abuse potential and cause severe psychic/ physical dependence in humans classified under

a) Schedule I b) Schedule II c) Schedule III d) Schedule IV

157. Timed release preparations are called as

a) pills b) capsules c) spansules d) None

158. Example for specialized system of drug delivery

a) Adhesive patches b) liposomes c) dermojet d) all the above

159. G protein coupled receptors action is through the effector system of

a) adenylate cyclase b) phospholipase c c) Phospholipase A2 d) all the above

160. Down regulation of receptors is due to continuous exposure of

a) Antagonist b) agonist c) inverse agonist d) all the above

161. Receptors for which agonist binds, but unable to elicit pharmacological response are

a) Spare receptors b) orphan receptors c) silent receptors d) None

162. Minimum dose of a drug producing desired response is called

a) Ceiling dose b) threshold dose c) both a and b d) None

163. Arthus reaction seen in hypersensitivity of

a) Type I b) Type II c) Type III d) Type IV

164. Potassium iodide is an example for the expectorant of

a) Reflex acting b) Direct acting c) Saline type d) None

165. Mucolytic expectorant preferred in equines is

a) bromhexine b) ambroxol c) dembrexine d) all

166. Example of nonopioid antitusssive is

a) codeine b) hydromorphine c) dextromethorphan d) none

167. Cats airways are susceptible to

a) Ach b) Histamine c) serotonin d) all

168. Cyproheptadine is

a) Histamine antagonist b) serotonin antagonist c) both a and b d) none

169. Misoprostol is an

a) PGE2 analogue b) PGE1 analogue c) PGF2 analogue d) none

170. Ephedrine is an example of agonist

a) α1 adrenoreceptors b) α 2 adrenoreceptors c) mixed type, both α and β d) None

ANSWER KEY

1. a	26. b.	51. c	76. c	101. c	126. d	151. b
2. b	27. a	52. d	77. a	102. c	127. b	152. a
3. a	28. c	53. a	78. b	103. c	128. b	153.b
4. a	29. b	54. b	79. c	104. d	129. b	154. b
5. a	30. d	55. b	80. a	105. d	130. a	155.c
6. b	31. b	56. b	81. c	106. a	131. d	156. b
7. b	32. c	57. b	82. d	107. c	132. c	157. c
8. a	33. a	58. c	83. d	108. c	133. b	158. d
9. d	34. c	59. b	84. a	109. c	134. c	159. d
10. c	35. d	60. c	85. b	110. c	135. a	160.b
11. d	36. c	61. a	86. b	111. c	136. c	161. c
12. a	37. c	62. b	87. a	112. c	137. b	162.b
13. c	38. a	63. a	88. c	113. d	138. b	163.c
14. b	39. a	64. b	89. c	114. b	139. b	164. c
15. c	40. c	65. b	90. d	115. c	140. c	165. c
16. c	41. d	66. b	91. c	116. c	141. b	166.c
17. b	42. d	67. c	92. c	117. b	142. c	167. a
18. b	43. b	68. d	93. c	118. c	143. c	168. c
19. c	44. d	69. c	94. d	119. c	144. b	169. b
20. b	45. a	70. c	95. b	120. b	145. c	170. c
21. a	46. c	71. d	96. c	121. b	146. a	
22. c	47. c	72. c	97. c	122. c	147. c	
23. a	48. b	73. a	98. d	123. d	148. b	
24. b	49. c	74. a	99. c	124. b	149. c	
25. b	50. d	75. c	100. b	125. c	150. b	

VETERINARY PHARMACOLOGY & TOXICOLOGY

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1. A substance is called as moderately toxic if its median lethal dose is

a) 1-5mg b) 5-500mg c) 0.5-1g d) > 1g

2. The following gas is responsible for pathological changes in zinc phosphide toxicity.

a)Phosphene b) Phosgene c) Sulphur d)None

3. In ruminants blue-green coloured faeces is indicative of following poisoning

a) Lead b) Copper c) Mercury

d) Selenium e) none of the above

4. Compulsive hypermotility is associated with following poisoning

a) Lead b) Copper c) Mercury

d) Selenium e) none of the above

5. Deficiency of the following in sheep predisposes to copper toxicity

a) Lead b) Copper c) Mercury d) Molybdenum

6. An example for nerve gas

a) Soman b) Sarin c) Tabun d) Serin

7. Cellulose digestion impairment in ruminants is due to the following poisoning

a) alkali disease b) rubratoxicosis c) oxalate poisoning d) Urea poisoning

8. The fungus causing secondary photosensitization in animals.

a) Aspergillus spp. b) Tirchophyton spp. c) Microsporium spp. d) Pithomyces spp.

9. *Bright blindness* in sheep is caused by ingestion of the following plant

a) alkali disease b) rubratoxicosis c) molybdosis

d) Both a & c e) none of the above

10. "*It is the dose that differentiates a substance from drug to poison*"…this statement was made by the scientist

a) Paracelsus b)Hippocrates c) socrates d) Homer

11. The branch of science that deals with assessing toxicity of substances of plant and animal origin and those produced by pathogenic bacteria is

a) Toxicology b) Toxinology c) Toxicokinetics d) Toxicodynamics

12. The type of treatment by which toxicity of acidic or basic drugs can be minimized is known as

a) Chelation b) Neutralisation c) Ion trapping d) Antidote therapy

13. The water soluble analogue of British antilewisite(BAL) is

a) BAL b) DMPS c) MDSA d) Both b & c

14. The metal that is volatile at room temperature is

a)As b) Se c) Mo d) Pb

15. Stertorous sounds due to laryngeal hemiplegia in horses is associated with the following poisoning

a)As b) Se c) Mo d) Pb

16. The specific antidote for iron dextran overdosage is

a)D-Penicillamine b) Desferrioxamine c) BAL d) DMPS

17. The toxic constituent that causes nuerolathyrism in animals

a) BAPN b) ODAP c) BAL d) Both a & b

18. The poisonous constituent of honey bee sting.

a) alkali disease b) rubratoxicosis c) molybdosis d) Both a & c e) none of the above

19. The Species highly susceptible for zearalenone toxicity

a) Porcine b) Equines c) Caprine d) Bovine

20. "***Geeldikkop***" condition in sheep is seen under the following toxicity:

a) alkali disease b) rubratoxicosis c) Photosensitisation d) Blind staggers

21. Progressive motor paralysis is observed in:

a) lead toxicity b) salt toxicity c) botulism d) strychnine poisoning

22. Mydriasis is not observed in one of the following:

a)snake bite b)tropane alkaloid c) HCN d) malathion

23. All of the following are teratogenic plants except:

a) *Lupinus caudatus* b) *Veratrum californicum* c) *Meliolotus alba* d) both a & b

24. One of the following organochlorine is least soluble in body fat:

a) lindane b) DDT c) methoxychlor d) dieldrin

25. "Bowmann's brik & Kunit" is associated with the following toxicity

a) goiterogens b) phytoestrogens c)haemagglutinins d) trypsin inhibitor

Kashiwazaki Kariwa tragedy is associated with the following:

a) aflatoxicosis b) alimentary toxic aleukia c) mercury poisoning d)radiation hazard

26. Zearalenone is a:

a) steroidal estrogenic b) phytoestrogen

c) steroidal antiestrogen d) non -steroidal estrogenic

27. The following is the toxic ratio of molybdenum:copper in the body:

a)6:1 b) <2:1 c) >2:1 d) 12:2

28. The antidote for paracetomol toxicity in cats is

a)N- methylGlycine b) N-acetylcysteine

c) N-acetylmethionine d) N-ethylguanine

29. "Phossy jaw" condition in sheep is seen under the following toxicity:

a) alkali disease b) rubratoxicosis c) molybdosis d) Both a & c e) none

30. Kicking and looking at abdomen is seen in one of the following poisoning condition

a) lead toxicity b) salt toxicity c) botulism d) urea poisoning

31. Eosinophilic meningoencephalitis in pigs is seen in following poisoning

a) lead toxicity b) salt toxicity c) botulism d) urea poisoning

32. All of the following are teratogenic plants except:

a) *Lupinus caudatus* b) *Veratrum californicum* c) *Meliolotus alba* d) both a & b

33. One of the following OP compound acts by inhibiting both esteratic and anionic sites of acetylcholinesterase:

a)Malathion b)Dichlorovos c) Tabun d) Echothiophate

34. "Glucosinolates" is associated wit the following toxicity

a) goiterogens b) phytoestrogens c)haemagglutinins d)Trypsin inhibitors

35. Which one of the following is an example for non-particulate ionizing radiation

a) α-rays b) β-rays c)UV-rays d) γ-rays

36. Brachanin is a

a) steroidal estrogenic b) phytoestrogen

c) steroidal antiestrogen d) non -steroidal estrogenic

37. "Animal drowns in its own fluid" is associated with

a)Bromethalin b)Bromadialone c) Diphacinone d) None of the above

38. The antidote for iron poisoning is

a. BAL b) Desferioxamine c) DMPS d) Activated charcoal

39. The *likelihood* of poisoning *under the conditions of usage* and the *probability of exposure*.

a)Hazard b) Toxicosis c) Poisoning d) Risk

40. The major site of absorption of poisonous substances for monogastric animals is

a)large instestine b) Small intestine c) Colon d) Rectum

41. Movement Xenobiotics molecules from point of exposure site into circulation is

a. absorption b) Distribution c) Metabolism d) Excretion

42. Acetylation conjugation is absent in

a. Cats b) Dogs c) Pigs d) Horses

43. Glucuronide conjugation is absent in

a) Cats b) Dogs c) Pigs d) Horses

44. Ethereal sulfate formation is absent in

a) Cats b) Dogs c) Pigs d) Horses

45. The Arsenic which is used as a growth promoter in poultry

a)Roxarsone b) arsanillic acid c) Lead arsenate d) Sodium arsenite

46. The word "**Exposure triad**" is associated with the following poisoning condition

a)As b) Se c) Hg d) Pb

47. The word "**Hemolytic crisis**" is associated with the following poisoning condition

a)As b) Cu c) Hg d) Pb

48. The word "Black berry jam spleen" is associated with the following poisoning condition

a)As b) Cu c) Hg d) Pb

49. The word "**Gunmetal kidney** " is associated with the following poisoning condition

a)As b) Cu c) Hg d) Pb

50. The word "**rooted at one spot**" is associated with the following poisoning condition

a)As b) Cu c) Hg d) Se

51. The word "**rocker shaped hoof**" is associated with the following poisoning condition

a)As b) Cu c) Hg d) Se

52. BAL is the drug of choice for the following poisoning condition

a)As b) Cu c) Pb d) Se

53. The resistant species for plumbism is

a) Cannine b) Equine c) Porcine d)Bovine

54. Loss of hairs in mane and tail of horses is associated with the following poisoning

a)As b) Cu c) Pb d) Se

55. The word "Peart scours" is associated with the following poisoning condition

a)As b) Cu c) Mo d) Se

56. The words "Pacing gait and spectacled appearance" is associated with the following poisoning condition

a) As b) Cu c) Mo d) Se

57. The words "Enzootic ataxia and sway back disease in ewes" is associated with the following poisoning condition

a) As b) Cu c) Mo d) Se

58. The ideal copper to molybdenum ratio is

a)6:1 b) 1:6 c) 2:1 d) 1:2

59. Selenium is competitive inhibitor for one of the following heavy metal

a)As b) Cu c) Hg d) Pb

60. The word "**chocolate coloured blood**" is associated with the following poisoning condition

a) Nitrate b) Cyanide c) CO d) CO_2

61. The word "**cherry red coloured blood**" is associated with the following poisoning condition

a) Nitrate b) Cyanide c) CO d) CO_2

62. Methylene blue is the drug of choice for the following poisoning

a) Nitrate b) Cyanide c) CO d) CO_2

63. The word "**irreversible cerebral edema** " is associated with the following poisoning condition

a) $NaNO_2$ b) HCN c) CO d) NaCl

64. **NMDA** receptors are damaged in the following poisoning condition

a)Hydrargism b) Blind staggers c) Plumbism d) Molybdenosis

65. The word **"Grunwald test"** is associated with the following poisoning condition

a)As b) Cu c) Hg d) Pb

66. The word **" periodic intermittent shifting lameness "** is associated with the following poisoning condition

a)As b) Cu c) Hg d) F

67. The enzyme aconitase is inhibited by one of the following poison

a)As b) Cu c) Hg d) F

68. The word **"Garlic like odor"** is associated with the following poisoning condition

a)As b) Cu c) P d) F

69. The percentage of urea incorporated in rations in amounts not to exceed of the total ration

a)1 b) 2 c) 3 d) 4

70. Propoxur acts by

a) cholinesterase stimulation b) cholinesterase inhibition

c) cholineacetyltransferase stimulation d) cholineacetyltransferase inhibition

71. Lindane is an example for

a) organophosphate b) carbamate c) organochlorine d) formamidine

72. Calcium borogluconate is indicated during the of therapy of

a) malathion b) methoxychlor c) amitraz d) phosphoros

73. The environment friendly insecticide among these is

a) Deltamethrin b) benzene hexachloride c) malathion d) dicofol

74. 2-PAM is contraindicated for the toxicity of

a) sumithion b) dichlorovos c) aldicarb d) echothiopate

75. Organochlorine compounds act by competitive inhibition of the binding of

a) Glycine b) GABA c) Glutamate d) Aspartate

76. Which one is comparatively highly toxic to fish and birds?

a) Pyrethroids b) parathion c) rotenone d) DDT

77. The antidote for carbaryl toxicity is

a) Atropine b) 2-PAM c) BAL d) DAM

78. The insecticide used in flea repellant collars in dogs is

a) allethrin b) permethrin c) amitraz d) lindane

79. Paraquat accumulates in

a) Liver b) pancreas c) kidney d) lung

80. The nonaticoagulant rodennticide among these is

a) Bromadialone b) Warfarin c) Bromethalin d) diphacinone

81. The antidote for warfarin toxicity is

a) Vitamin K3 b) Vitamin K1 c) Vitamin K2 d) Vitamin C

82. Cholecalciferol based rodenticides are

a) Vitamin E based b) Vit B based c) Vitamink K d) Vitamin D based

83. The compound degrading to reactive (toxic) phosphine gas which accounts for much of the toxicity is

a) Zinc phosphate b) Zinc phosphide c) zinc sulfate d) zinc chloride

84. Universal antidote is

a) Atropine b) acetic acid c) tannic acid d)actvated charcoal

85. A characteristic acetylene odor and evidence of gastritis upon postmortem is seen in the toxicity of

a) Warfarin b) formaldehyde c) aluminium phosphide d) phosphorous

86. An example for lethal synthesis is

a) Fluroacetate b) warfarin

c) hydrochloric acid d) polychlorinated biphenyls

87. CNS depressant among these is

a) methoxychlor b) deltamethrin c) HCN d) bromadiolone

88. Metabolism of the coumarins involves enzyme function of

a) Mixed function oxidase b) monoamino oxidase c) COMT d) AChE

89. The most susceptible animal for phenolic compounds toxicity is

a.Dog b) pig c) horse d) cat

90. The word "**suicidal transport/poisoning"** associated with the following poisoning condition

a)Lathyrism b) Abrus Precatorius c) Croton tiglium d)Senecio jacobae

91. The word "steep dose response curve" is associated in the treatment of one of the following poisoning condition

a)Strycnus Nuxvomica b) Abrus Precatorius c) Croton tiglium d) Senecio jacobae

92. One of the following plant causes neurolathyrism in animals

a)Strycnus Nuxvomica b) lathyrus odoratus c) Lathyrus sativus d) Senecio jacobae

93. One of the following produces secondary photosensitization

a)Strycnus Nuxvomica b) lathyrus odoratus c) Lantana camera d) Senecio jacobae

94. One of the following is commonly called as bracken fern poisoning

a)Strycnus Nuxvomica b) lathyrus odoratus c) Pteridium aquilinum d) Senecio

95. The word " **Ptaquiloside"** associated with the following poisoning condition

a)Strycnus Nuxvomica b) lathyrus odoratus c) Pteridium aquilinum d) Senecio

96. One of the following is commonly called as radiomimetic disease in cattle and sheep

a)Strycnus Nuxvomica b) lathyrus odoratus c) Pteridium aquilinum d) Senecio

97. The word " **Bovine enzootic hematuria"** is associated with the following poisoning condition

a)Strycnus Nuxvomica b) lathyrus odoratus c) Pteridium aquilinum d) Senecio

98. DL-batyl alcohol is used in the treatment of the following poisoning condition

a)Strycnus Nuxvomica b) lathyrus odoratus c) Pteridium aquilinum d) Senecio

99. The proteins that are secreted by a bacterial cell into surrounding fluids, and are produced by both Gram-negative and Gram-positive bacteria

a)endotoxins b) exotoxins c) ectotoxins d) all the above

100. Which of the following is a non specific binding protein for metals

a)metallothioniens b) transferrin c) albumin d) ferritin

101. The biochemical mechanism responsible for death from cyanide poisoning involves

a)formation of methahemoglobin b) formation of carboxyhemoglobin

c) Inhibition of cytochrome C d) Inhibition of cytochrome oxidase

102. Aflatoxins are

a) potent neurotoxins b) relatively nontoxic on an acute basis

b) liver carcinogens in certain species only d) renal carcinogens in humans

103. Quinoline Alkaloids example

a)papavera sp b) veratrum sp c) Cinchona Sp d) atropa

104. Non cyanogenic plant

a)acacia leucophloea b) sorgum c) lotus d) Datura

105. Non Organochlorine examples

a)DDT b) Aldrin c) lindane d) carbaryl

106. Not true in OPC poisoning

a)Hyperthermia b) salivation c) miosis d) convulsion

107. The order of potency of aflotoxins

a)G1>B1>B2>G2 b) B1>G1>B2>G2 c) G1>B2>B1>G2 d) B1>B2>G1>G2

108. Cobra Belongs to family of

a)Elapidae b) Cortalidae c) viperidae d) cobradae

109. Tetrodotoxin produced by

a)shell fish b) puffer fish c) jelly fish d) snake fish

ANSWER KEY

1. b	21. C	41. b	61. a	81. c	101. c
2. a	22. a	42. a	62. b	82. b	102. d
3. b	23. d	43. b	63. a	83. d	103.c
4. a	24. c	44. a	64. d	84. b	104.c
5. d	25. d	45. c	65. c	85. d	105.d
6. c	26. d	46. a	66. d	86. c	106.d
7. c	27. d	47. c	67. d	87. a	107.a
8. c	28. b	48. b	68. d	88. d	108.b
9. e	29. b	49. b	69. c	89. a	109.a
10. a	30. e	50. b	70. a	90. d	110.b
11. b	31. d	51. d	71. b	91. b	
12. c	32. b	52. d	72. a	92. a	
13. d	33. a	53. a	73. b	93. b	
14. d	34. d	54. c	74. a	94. c	
15. d	35. a	55. d	75. c	95. c	
16. b	36. d	56. c	76. b	96. c	
17. b	37. b	57. c	77. c	97. c	
18. e	38. d	58. c	78. a	98. c	
19. a	39. b	59. a	79. c	99. c	
20. c	40. a	60. d	80. d	100. b	

EXERCISE

1. The signal transduction across neuro-effector tissue is fastest in the following case:
   a. through nuclear receptors b. through metabotropic receptors
   c. through ligand gated ionic channels d. through tyrosine kinase linked receptors
2. The hypothetical model used to derive potential toxic effect of a xenobiotic is called:
   a. *in vitro* toxicology b. Molecular toxicology
   c. predictive toxicology d. regulatory toxicology
3. The time lag for the drug to fall one-half of the original concentration in plasma is measured to determine:
   a. plasma half-life b. clearance rate of drugs
   c. volume of distribution d. duration of action
4. '*gyr*-A' gene induced mutation/ drug resistance is associated with:
   a. beta-lactam antibiotics b. sulphonamides
   c. fluoroquinolones d. tetracyclins
5. The hydro-alcoholic medicinal preparations are called:
   c. syrup b. mixture c. elixirs d. liniment
6. The *Phase-II* drug metabolism otherwise refereed as:
   a. oxidation reactions b. pre-systemic metabolism
   c. extra-hepatic metabolism d. synthetic metabolism
7. The primary purpose of the metabolism of drugs is to render them:
   a. more polar b. non-polar c. lipid soluble d. none
8. Previously identified endothelium derived relaxing factor (EDRF) is currently named as:
   a. endothelin b. platelet activating factor(PAF)
   c. nitric oxide(NO) d. relaxin
9. The bioactive principle essentially found in *Curcuma longa:*
   a. curcumin cucurbitine c. vitamin-C d. piperine
10. The features of carrier mediated transport of drugs include all the following except:
    a. selectivity b. against the concentration gradient
    c. energy(ATP) dependent d. non-satuarability
11. A sudden decrease in response to a drug after repeated exposure to a drug:
    a. anaphylaxis b. tachyphylaxis c antagonist d. idiosyncrasy
12. 'Senecosis' is a condition associated with:
    a. pyrrolizidine alkaloids b. selenium toxicity

c. selenium deficiency d. chronic arsenic toxicity

13. One of the following statements is not correct with respect to LD_{50} studies:

a. it varies with species b.it measures sub-lethal toxicity

c. it varies with route & vehicle used

d. idiosyncratic reactions can not be measured

14. The drug of choice to treat peptic ulcer:

a. ondansetron b. losortan c. omeprazole d. cimetidine

15. The principal and ubiquitous inhibitory amino acid neurotransmitter in the CNS is:

a. L-glutamate **b.** gamma-amino butyric acid(GABA)

c. dopamine d. acetylcholine

16. One of the following is a DNA polymerase inhibitor:

a. indianvir b. zidovudine c. amantadine d.acyclovir

17. A non-sedative H_1 antihistamine:

a. promethazine b. chlorpheniramine

c. diphenhydramine d. cetirizine

18. 'Ricin' is a:

a. toxalbumin b. trypsin inhibitor

c. neurotoxic alkaloid d. cyanogenetic glycoside

19. DNA-dependent RNA polymerase in prokaryotic cells can be inhibited by:

A. rifampicin b. polymixin-B c. bacitracin d. azithromycin

20. A second generation macrolide antibiotic:

A. clarethromycin b. netilmycin c. sisomiycin d. tylosin

21. The prefaced antidote for nitrate/nitrite toxicity in cattle is:

a. methylene blue **b.** sodium thiosulfate

c. disodium calcium EDTA d. vitamin-B_{12}

22. The 'gun metal kidney' is observed in:

a. copper toxicty b. lead toxicity c. oxalate toxicity d. arsenic poisoning

23. 'Cerebral oedema' is associated with:

a. phosphrous toxicity b. copper toxicity

c. salt toxicity d. urea toxicity

24. 'Arthropathy' is one of the major side effects of:

a. fluoroquinolones b. aminoglycosides

c. cephalosporins d. benzimidazoles

25. Inhibition of cyclooxygenase(COX) by pheacetin can be described as:

a. COX-1 specific b. COX-2 specific

c. COX-3 specific d. non-selective

26. The mechanism of action of cephalosporins involves inhibition of :

a. DNA synthesis b. cell wall synthesis

c. folic acid synthesis d. protein synthesis

27. A competitive antagonist of benzodiazepine is:

a. 4-aminopyridine b. nalorphine c. yohimbine hcl d. flumazenil

28. Minoxidil is a:

a. Na^{+}-K^{+} ATP*ase* inhibitor b. Ca^{+2}-channel blocker

c. Na^{+2} channel blocker d. K^{+} channel activator

29. The measure of how strongly a drug binds to its receptor is called:

a. efficacy b. affinity c. potency d. half-life

30. The maximum dose that do not induce any sign of adverse effect in most susceptible species and tested by using most sensitive indicator of toxicity:

a. acceptable daily intake (ADI)

b. virtual safe dose(VSD)

c. not-observed adverse –effect level(NOAEL)

d. maximum permissible limit(MPL)

31. An anti-cancer drug which was extracted from '*Yew tree*':

a. lovastatin b. taxol c. artimisinin d. quinine

32. A nephrotoxic mycotoxin considered twice as toxic as afalatoxin-B_1in swine is:

a. ochratoxin-A b. rubratoxin

c. T_2-toxin d. zeralenone (F_2 toxin)

33. A sedative- analgesic and muscle relaxant anaesthetic:

a. ketamine hcl b. chlorpromazine hcl

c. xylazine hcl d. yohimbine hcl

34. One of the following is not a true aminoglycoside:

a. streptomycin b. neomycin c. gentamicin d. spectinomycin

35. The class of pesticide having large mammalian: insect toxicity ratio:

a. organophosphate b. organochlorins

c. carbamates d. synthetic pyrethroids

36. 'Epinephrine reversal' phenomenon is associated with:

a. tropane alkaloids b. ergot alkaloids

c. methylxanthins d. tricyclic antideprasents

37. The drugs which are used for rare disease:

a. emergency drugs b. rare drugs

c. orphan drugs d. over the counter drugs

38. The branch of pharmacology dealing with study of variation in drug response on account of cytochrome P_{450} isoenzymes:

a. pharmacokinetics b. pharmacovigilance

c. pharmcogenetics d. pharmacotherapy

39. The drug which has been banned in India on account of eco-toxic effects:

a. meloxicam b. nimesulide c. phenylbutazone d. diclofenac

40. Ptaqiloside is a carcinogenic glycoside present in:

a. *Pterridium aquilinum* (bracen fern) b. *Dyropterous filix –mas* (male fern)

c. *Equisetum arvense* (horse tail) d. *Euptorium adeophorum* (croften weed)

41. Evidence of blue-green ingesta and deep green colored faeces is indicative of;

a. acute copper toxicity b. lead poisoning

c. phosphorus toxity d. arsenic toxicity

42. The type of voltage gated calcium channel involved in cardiac pace maker and atria:

a. T b. L c. N d. PQ

43.One of the following event is not true when membrane is depolarized by -50mV :

a. rapid increase in Na+ permeability b. slow and steady increase in K+ permeability

c. action potential is generated d. rapid increase in Ca+ permeability

44. In most nerve cells repolarization is associated with opening of:

a. voltage dependent K+ channel b. voltage dependent Ca+ channel

c. ligand linked Na+ channel d. None of the above

45. Agents used to relieve muscle spasm in the rare condition called malignant hyperthermia associated with inherited abnormal Rynodine receptors(RyR):

a. Danthroline b. caffeine c. thapsgargin d. mibefradil

46. One of the following inhibits CYP2E1 and decrease substantially the formation of trifluroacetic acid during halothane anaesthesia:

a. Disulfiram b. diazepam c. aspirin d.xanthine alkaloids

47. Prostaglandin induced constriction of bronchial and GI-tract smooth muscles is mediated via:

a. EP1 receptors b. EP2 receptors

c. EP3 receptors d. inhibition of COX enzyme

48. All but not one of the following is a reverse transcriptase inhibitor:

a. Saquinavir b. zidovudine c. abacavir d. lamivudine

49. A macolide antifungal antibiotic having affinity for fungal membrane sterol synthesis:

a. Amphotericin b. nystatin c. griseofulvin d. itraconazole

50. One of the following prevent intestinal alpha-glycosidase inhibitor indicated in Type-II *diabetes mellitus*:

a. Metformin b. acarbose c. tolbutamide d. glibenclamide

51. A chimeric monoclonal antibody(mAb) against the cytokine TNF-alpha used for rhemotoid arthritis and Chrone's disease:

a. Infliximab b. basiliximab c. daclizumab d. abciximab

52. Anticholesterol drug inhibiting HMG-CoA reductase:

a. ciprofibrate b.fenofibrate c. gemfibrozil d. atorvastatin

53. Isotope used in radiation therapy of thyroid tumor:

a. ^{131}I b. ^{125}I c. ^{32}P d. ^{3}H

54. A GABA analogue which do not act on GABA receptor but inhibit amino acid transporter system in the neuron:

a. Vigabatrin b. topiramate c. gabapentin d. ivermectin

55. *beta*-bungarotoxin present in venom of cobra family whose action is similar to:

a. botulinum toxin b. picrotoxin

c. physostigmine(eserine) d. lidocaine

VETERINARY MICROBIOLOGY

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1. Aseptic technique was developed by

a) E. Jenner b) J. Lister c) R. Koch d) L. pasteur

2. The term vaccine was coined by

a) E. Jenner b) J. Tyndall c) R. Koch d) L. pasteur

3. Chemical basis of specificity of immune reaction and blood groups in humans was discovered by

a) E. Metchnikoff b) R. Koch c) K. Landsteiner d) F. Hesse

4. Complement system was discovered by

a) E. Metchnikoff b) J. Bordet c) K. Landsteiner d) L. Pasteur

5. Father of bacteriology

a) E. Jenner b) J. Lister c) R. Koch d) L. pasteur

6. Electron microscope was invented by

a) Wright brothers b) Ruska and Mortom c) Rous and Border d) L. pasteur

7. The limit of resolution of ordinary microscope is

a. 200 nm a b) 250µm c) 200µm d) 400 nm

8. The shortest distance by which two particles are separated to give distinct images is

a) Magnification b) Numerical aperture c) Resolving power d) None

9. The three principle on which compound microscope works is magnification, resolving power and

a) Illusion b) Numerical aperture c) Illumination d) wavelength

10. The ribosome system in bacteria is

a) 70 S b) 75 S c) 80 S d) 85 S

11. The major surface receptor of Natural killer cell is

a) CD4 b) CD8 c) CD 56 d) None

12. The glyco proteins produced by virus infected cells are called

a) Interleukins b) Interferon c) Antigun d) Leukotrines

13. Acute phase proteins is /are

a) Lectins b) Fibronectin c) Iron binding proteins d) All

14. The sentinel cells is / are

a) Macrophages b) Dendritic cells c) Mast cells d) All

15. B Lymphocytes of birds mature in

a) Bone marrow b) Bursa of Fabricious c) Spleen d) Blood

16. T Lymphocytes mature in

a) Bone marrow b) Thymus c) Spleen d) Blood

17. Sentinel cells recognize pathogen by

a) TLR b) NLR c) Both a and b d) none

18. T cells recognize

a) Antigen alone b) Antigen in association with MHC –I only

c) Antigen in association with MHC –II only d) All of these

19. T cells recognize Antigen through

a) TCR alone b) TCR-CD3 complex c) BCR d) None of these

20. The Cells bearing CD4 recognize

a) MHC –I b) MHC –II c) MHC –III d) All of these

21. Antons Test is done for

a) Listeria b) Yersinia c) Both a and b. d) None.

22. Polymyxin is produced by

a) *C. polymyxa* b) *B. polymyxa* c) *B. subtilis* d) *C. perfringens*

23. Lemon shaped bacilli is seen in

a) *C. chuvoei* b) *C. tetani* c) *C. perfringens* d) *C. colinum*

24. Ray fungus

a) *A. fumigatus* b) *M. canis* c) *A. bovis* d) *T. rubrum*

25. Anthrax spores are effectively killed by

a) 4% KMNO4 b) 4% Phenol c) 4% NaOH d) None

26. The following bacteria produce straus test in male guinea pigs except;

a) *B. mallei* b) *A. lignieresii* c) *B. abortus* d) *P. multocida*

27. IMVic Test for *E.coli* is

a) ++-- b) +--- c) +-+- d) --++

28. Tumbling motility is seen is

a) Listeria b) Leptospira c) Bacillus d) Clostridia

29. Kitten test is done to diagnose

a) Streptococci b) Staphylococci c) Bacillus d) Listeria

30. Serotyping of E. coli is done based on the antigen from

a) Somatic b) Capsule c) Flagella d) All the above

31. The members of the order Mononnegavirales includes

a. Rhabdoviridae b. Picornaviridae c. Birnaviridae d. Coronavirdae

32. The order Nidovirales comprises of

a. Coronavirdae b. Arterivirdaec. C. Both a and b d. None

33. Streaks of hemorrhages are seen in the large intestines in animal affected with

a. Rinderpest b. PPR C. Both a and b d. None

34. The first step in viral replication is

a. Attachment b. Uncoating. C. Replication of nucleic acid d. Release

35. The polymerase enzyme functions as

a. Transcriptase b. Replicase c. Both a and b d. None

36. S19 vaccine is used in

a) Brucellosis b) Leptospirosis c) Anthrax d) Q-fever

37. The mycobacterium affecting armadillos and chimpanzee is

a) *M. tuberculosis* b) *M. leprae* c) *M. africanum* d) *M. microti*

38. Glassers disease in pig is caused by

a) *B. mallei* b) *H. Parasuis* c) *E. rhusiopathiae* d) *Y. enterocolitica*

39. Romanowsky stain is to demonstrate

a) Haemobartonella b) Mycobacterium c) Leptospira d) Trichophyton

40. Lateral bodies are present in the structures of

a) Vaccinia virus b) Cow pox virus c) Variola virus d) All of these

41. Lumpy skin diseae virus belongs to the genus

a) Leporipoxvirus b) Orthopoxvirus c) Suipoxvirus d) Capripoxvirus

42. Phylogenetically Sheep pox and goat pox virus are

a. Identical b. Distinct c. Both a and b d. Neither a nor b

43. Sheep pox produces inclusion bodies which are

a. Intra nuclear basophilic b. Intra cytoplasmic basophilic

c. Intra nuclear acidophilic d. Intra cytoplasmic acidophilic

44. Previuosly, African swine fever virus was in the family

a. Poxviridae b. Herpesviridae c. Adenoviridae d. Iridovirdae

45. African swine fever virus is maintained in the life cycle of

a. Ornithodorus b. Rhipicephalus c. Both a and b d. None

46. Parvo virus multiplies only in the nuclei of

a. Resting cells b. Dividing cells c. Both a and b d.None

47. Feline panleukopenia virus belongs to

a. Parvoviridae b. Circoviridae c. Adenoviridae d. Caliciviridae

48. Porcine parvovirus is a major cause of

a. Still birth b. Mummified fetus c. EED, Infertility d. All of these

49. Chicken anemia virus belongs to

a. Caliciviridae b. Circoviridae c.Herpesviridae d. Parvoviridae

50. Post weaning multi systemic wasting syndrome is caused by

a. Porcine circo virus-2 b. Porcine circo virus-5

c. Porcine exanthema virus d. none of these

ANSWER KEY

1. b	26. a
2. d	27. a
3. c	28. a
4. b	29. b
5. c	30. d
6. b	31. a
7. a	32. c
8. c	33. b
9. c	34. a
10. a	35. c
11. c	36. a
12. b	37. b
13. d	38. b
14. d	39. a
15. b	40. d
16. b	41. d
17. c	42. b
18. b	43. d
19. b	44. a
20. b	45. a
21. d	46. b
22. a	47. a
23. b	48. d
24. b	49. b
25. a	50. a

1. Bacteria can be characterised by

a) Presence of mesosomes and absence of mitochondria

b) Absence of mesosomes and presence of mitochondria

c) Absence of both

d) presence of both

2. In bacteria the genetic material is located in

a) Nucleus b) Nucleoid c) cytoplasm d)Outer membrane

3. Bacteria are named according to

a) Binomial system b) Trinomial system c) Polynomial system d) None

4. Serum is sterilized by

a) Autoclave b) Hotair oven c) Filtration d) Direct flaming

5. Oil is sterilized by

a) Incineration b) Hotair oven c) Filtration d) Tyndalization

6. The molecules responsible for recognition of antigen by immune system are

a) B cell receptor b) T cell receptor c) MHC molecules d) All of these

7. The antigen independent maturation of lymphoid cells occurs in

a) Primary lymphoid organ b) Secondary lymphoid organ

c) Tertiary lymphoid organ d) None

8. The antigen dependent maturation of lymphoid cells occurs in

a) Primary lymphoid organ b) Secondary lymphoid organ

c) Tertiary lymphoid organ d) None

9. The predominant lymphocyte in the blood circulation is

a) B cell b) T cell c) Both a and b d) None of these

10. Immunoglobulin is the surface receptor of

a) B cell b) T cell c) Both a and b d) None of these

11. Dark field microscopy is used to diagnose

a) Listeriosis b) Leptospirosis c) Anthrax d) Q-fever

12. Fried egg appearance of clonies are seen in

a) Histoplasma b) Mycoplasma c) Streptococci d) Pasturella

13. Bottle shaped cells and Monopolar budding is seen in

a) Malassezia b) Cryptococcus c) Histoplasma d) Candida

14. CCPP is caused by

a) *M. capricolum* b) *M. gallisepticum* c) *M. hyorhinis* d) *M. bovis*

15. Bomb blast growth in stab culture is seen in

a) Streptococci b) Staphylococci c) Bacillus d) Listeria

16. Nasal polyp is seen in

a) Aspergillosis b) Rhinosporidiosis c) Coccidiosis d) Sporotrichosis

17. Rose Bengal plate test is used for the diagnosis of

a) Anthrax b) Q-fever c) Brucellosis d) Coccidiosis

18. Intracellular pathogen

a) Brucella b) Listeria c) Both d) None

19. Avian hepatitis is caused by

a) *P. multocida* b) *C. jejuni* c) *E. coli* d) *S. pullorum*

20. Dimorhpic Fungi are

a) Blastomyces b) Coccidioides c) Histoplasma d) All

21. Spheroplasts are

a) G-ve bacteria without cell wall

b) G-ve bacteria with partial cell wall

c) G-ve bacteria without cytoplasmic membrane

d) G-ve bacteria with partial cytoplasmic membrane

22. Bacterial capsule

a) resist phagocytosis b) prevents bacteriophage attachment

c) acts as reserviour of food d) All of the above

23. Bacteria surrounded by flagella all over the surface is known as

a) Amphitrichous b) Peritrichous c) Lopotrichous d) Atrichous

24. Bacterial spores are resistant to

a) desiccation b) disinfectant c) radiation d) all of the above

25. Plasmids aid in

a) drug resistance b) toxigenicity c) both a and b d) none

26. The antibody that mediates allergic reactions is

a. Ig G b. Ig M c. Ig E d. Ig D

27. Fc region of Ig G is formed by

a. Only heavy chain b. Only light chain

c. combination of heavy and light chain d. None of these

28. The light chain is/are

a. Kappa b. Lambda c. Both a and b d. Many

29. The Hinge region of Ig G is rich in

a. Proline, Cystien b. Arginine c. Methionine d. None of these

30. The changes in the amino acid sequences of the variable region of light and heavy chains are called as

a. Idiotypes b. Isotypes c. allotypes d. None of these

31. Diamond skin disease is caused by

a) *B. mallei* b) *H. Parasuis* c) *E. rhusiopathiae* d)*Y. enterocolitica*

32. Malignant carbuncle is cutaneous form of

a) Anthrax b) Q-fever c) Brucellosis d) Coccidiosis

33. Naglers reaction is characteristic of

a) *C. tetani* b) C. *septicum* c) *C. haemolyticum* d) *C. perfringens*

34. Hotis test is used to diagnose

a) Anthrax b) Q-fever c) Brucellosis d) Mastitis

35. Edwards media is used in the isolation of

a) Staphylococci b) Leptospira c) Bacillus d) Streptococci

36. Viruses are

a. obligate parasites b. Intracellular parasites c. Both a and b d. none of these

37. Genome of DNA viruses are

a. Always linear b. Always circular c. can be linear as well as circular d. none

38. The taxonomy of viruses by ICTV includes order/s

a. Mononegavirale b. Picornavirale c. Herpesvirale d. all of these

39. The term Virus denotes a

a. Mature virus particle capable of replication

b. virus particle not capable of replication

c. both a and b d. none of these

40. Icosahodron symmetry of virus has

a. 20 faces, 30 edges, 12 vertex b. 20 edges, 30 faces, 12 vertex

c. 12 edges, 30 faces, 20 vertex d. none of the above

41. The described number of Blue tongue serotypes are

a. 21 b. 22 C. 24 d. 25

42. Gumbaro disease affects

a. Adults b. Chicks c. All age groups d. Not a disease of birds

43. The major antigenic portion of IBD virus is

a. VP1 b. VP5 C. VP2 d. VP4

44. The current number of H and N antigens described for influenza A viruses are

a. 16 H, 9 N b. 9 H, 16 N C. 18 H, 10 N d. 10 H, 18 N

45. Antigenic shift in avian influenza viruses involves

a. Minor changes in sequences b. Major segmental re-assortments

c. No changes occur in the genetic material d. None of these

46. The first episode of human influenza in 1918 was caused by

a. H1N1 b. H3N3 C. H5N1 d. H3N2

47. Current commercial vaccines for equine influenza contain the subtypes

a. H3N8 b.H7N7 c. Both a and b d. None

48. Herringbone appearance of nucleopcapsid is characteristic of

a. Paramyxoviridae b.Orthomyxoviridae c. Rhabdovirdae d. Bornavirdae

49. Nipha virus belongs to the genus

a. Respirovirus b.Henipavirus c. Raubulavirus d. Morbillivirus

50. PPR is most severe in

a. Sheep b. Goats c. Cattle d. All

ANSWER KEY

1. a	26. c
2. b	27. c
3. a	28. c
4. c	29. a
5. b	30. a
6. a	31. c
7. b	32. a
8. a	33. d
9. c	34. d
10. b	35. d
11. b	36. c
12. b	37. b
13. a	38. d
14. a	39. a
15. d	40. a
16. b	41. d
17. a	42. b
18. c	43. c
19. b	44. a
20. d	45. b
21. b	46. a
22. d	47. c
23. b	48. a
24. d	49. b
25. c	50. b

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1. The cercaria of schistosoma species are
   a. Xiphidio type b)Gymnocephalus type **c**)Furco circus type d)Micro circus type
2. An association between the two individuals where each benefits from other but the association is not obligatory and independent existence by both is possible
   a)Symbiosis b)Commensalism c)Predatorism d)mutualism
3. Cyst is the product of
   a)Sexual reproduction b)Asexual reproduction c)both a & b d) None of the above
4. Complete metamorphosis is seen in
   a) Flies and Fleas b) Ticks and mites c) both a & b d) none
5. Presence of lappests behind each sucker is a feature of
   a) *Moniezia expansa* b) *Anaplocephala perfoliata*
   c) *Anaplocephala magna* d) *Taenia solium*
6. Dragging of annus against the ground is observed in
   a) *Dipylidium caninum* b) *Taenia multiceps*
   c) *Diphyllobothrium latum* d) *Raillietina tetragona*
7. Measly beef is caused by
   a)Cysticerens cellulosae b) Cysticerus cerbralis c)Cysticereoid d)Cysticercus bovis
8. Heterakis gallinae is associated with transmission of
   a) *Histomonas meleagridis* b)*Trichomoinas gallinae* c)Coccidiosis d) none
9. Pimply gut in cattle is caused by
   a) *Moniezia expansa* b) *Toxocara vitulorum*
   c) *Oesohogostomum radiatum* d) both b and c
10. Smallest tapeworm of poultry
    a)*Raillietina tetragona* b)*Cotugnia diagonophora*
    c) *Davainea proglottina* d)none of the above
11. "Hump sore" in cattle is caused by
    a) Habronema sp b) Stephanofilaria sp c) Draschia sp d)Oxyuris sp
12. Slime ball is associated with
    a) *Fasciola hepatica* b) *Paramphistomum cervi*
    c) *Stilesia hepatica* d) *Diroloelium dendritium*
13. Phylum platyhelminthes includes classes

a) Trematodes b) Cestodes c) nematodes d) both a & b

14. Macrocytic hypochromic anaemia develops in dog due to infection with

a) *Dipylidium caniunum* b)*Echinococcus granulosus*

c) *Diphyllobothrium latum* d)none of these

15. Radia stage is absent in the life cycle of

a) *Fasciola gigantic* b)*Paramphistomum cervi*

c)*Schistoroma nasale* d) all *Oxyspirura mansoni* is

a) Pin worm of horse b)Eye worm of poultry c)Eye worm of cattle d) none

16. Mode of hook worm infection of animal

a) Oral route b) Skin penetration c) Lactogenic d)all

17. The adults are almost non pathogenic but immature stages are plug feeders of mucosa and cause haemorrhagic duodenitis in ruminants

a) *Paramphistomum cervi* b) *Moniezia expansa*

c) *Schistosoma incognitum* d) *Toxocara vitulorum*

18. Verminous dermatitis is characterized by small papules which coalesce to form large lesions in the pinnae of ear of buffalo, covered with crests,is caused by

a) *Thelazia rhodesii* b) *Stephnofilaria zaheeri*

c) *Chabertia sp* d) *Gongylonema pulchrum*

19. *Dioctophyma renale* is the largest nematode of

a) Dog b) Cattle c) Horse d) Buffalo

20. Cercaria pigmentata is stage found in

a) Parmphistomes b) Schistosomes c) Gastrointestinal nematodes d) Cestodes

21. Bleeding spots in cattle is caused by

a) *Parfilaria haemorrhagica* b) *Seteria digitata*

c) *Parafilaria bovicola* d) *Dirofilaria immitis*

22. The following is an acanthocephalan

a) Tongue worm b) Macrocanthorhyncus hirudenens

c) Leech d) Oesophagostomum

23. Parasitic catarrhal bronchitis in sheep is caused by

a) *Dictyocaulus filarae* b) *Dictyocaulus viviparus*

c) *Dictyocaulus arnfieldi* d) none of the above

24. Herring worm disease is caused by

a) *Heterakis gallinarum* b) *Habronema muscae*

c) *Anisakis simplex* d) *Spirocerco lupi*

25. The trematode parasite found in lung that occurring in pairs

a) Dicrocoelium sp b) Paragonimus sp c) Opisthorchis sp d) Schistosoma sp

26. Rose thorn shaped hooks on the rostellum is a character of

a) Taenia sp b) Raillitena sp c) Opisthorchis sp d) Dipylidium sp

27. The hook worm of cattle is

a) *B.trigonocephalum* b) *B.phlebotomum* c) *A.caninum* d) *A.duodenale*

28. Epaulettes are present in

a) *Stephanurus dentatus* b) *Strongylus vulgaris*

c) *Strongylus edentatus* d) *Haemonchus contortus*

29. The location of *Heterakis gallinarum* in the host is

a) Rumen b) Abomarum c) Omasum d) Caecum

30. Gullet worm is the name given to

a) Gongylonema sp b) Gnathostoma sp c) Tetrameres sp d) none of these

31. Cerebrospinal nematodiasis is associated with

a) *Setaria digitata* b) *Onchocerca sp* c) *Dirofilaria immitis* d) none of these

32. Fringed tapeworm is the name given to

a) *Moniezia expansa* b) *Thysanosoma actioides* c) *Stilesia heatica* d) none

33. Neurocysticerocosis(NCC) is related with

a) Cysticercus celluslosae b) Cysticercus bovis

c) Cysticercus tenuicollis d) none of these

34. Parthenogenetic females are found in

a) Strongylus sp b) Oesophagostomum sp c) Strongyloides sp d) none

35. The scientific name of black scour worm is

a) *T.colubriformis* b) *H.contortus* c) *O.ostertagi* d) *D.latum*

36. *Musca domestica* is the vector of

a) *Habronema muscae* b) *Draschia megastoma* c)both d)none of these

37. Lung worm of cat is

a) *Angiostrongylus cantonensis* b) *Protostrongylus rufescence*

c) *Metastrongylus salmi* d) none of the above

38. Gid in sheep is caused by

a) *Taenia hydatigena* b) *Taenia multiceps*

c) *Taenia taeniformis* d) *Taenia pisiformis*

39. Moracco leathrer appearance is seen in

a) *Diphyllobothrium latum* b) *Trichostrongylus axei*

c) *Parafilaria bovicola* d) *Ostertagia ostertagi*

40. Nodular taeniosis is caused by

a) *Davainea proglotina* b) *Raillietena tetragona*

c) *Raillietena echinobothrida* d) *Hymenolepis nana*

41. Fibrosis and atrophy of pancreas is caused by

a) *Dicrocoelium dendriticum* b) *Eurytrema pancreaticum*

c) *Explanatum explanatum* d) *Cotylophoron cotylophorum*

42. The common mode of tansmission in schistosomiasis is by

a) Skin penetration b) Oral route c) both A & B d) none

43. The cestode with posterior border of each mature segment containing a row of interproglottidal glands arrange around the small pits across the entire width is

a) *Moniezia benedini* b) *Moniezia expansa*

c) *Paranaplocephala mammilana* d) none of the above

44. Skin fluke is

a) *Paragonimus westermani* b) *Collriclum faba*

c) *Nanophyetus salminicola* d) *Opisthorchis felineus*

45. Name of the male nematode parasite of horse that has single spicule is

a) *Oxyspirura mansoni* b) *Enterobius vermicularis* c) *Oxyuris equi* d) both a and c

46. Basic unit of excretory system in trematodes is

a) flame cells b) cuticle c) both A and B d) None

47. The prediliction site of Thelezia worms is

a) Heart b) Skin c) Ear d) Eye

48. Barrel shaped eggs with bipolar plugs

a) Toxocara sp b) Moniezia sp c) Strongyle sp d) Trichuris sp

49. Whip worm of dog is

a) *Trichuris suis* b) *Trichuis vulpis* c) *Setaria digitata* d) *Stephanofilaria zaheeri*

ANSWER KEY

1	c	2	d	3	b	4	a
5	b	6	a	7	d	8	a
9	c	10	c	11	b	12	d
13	d	14	c	15	c	16	b
17	b	18	a	19	b	20	a
21	a	22	c	23	b	24	a
25	c	26	b	27	d	28	b
29	a	30	d	31	a	32	a
33	b	34	a	35	c	36	a
37	c	38	a	39	b	40	d
41	c	42	b	43	a	44	b
45	b	46	c	47	a	48	d
49	d	50	b				

VETERINARY ENTOMOLOGY AND ACAROLOGY

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1. The fly called "Ox Warbles" are responsible for great economic loss to hide traders
   1. Booponus intonsus 2. Hypoderma lineatum
   3. Haematobia irritans 4. Phormia regina
2. In _____ fly the development of larva undergoes inside the nasal passage and mature larva crawls out and pupate in the ground
   1. Melophagus ovinus 2.Oestrus ovis
   3. Hypoderma lineatum 4. Phormia regina
3. _____ fly larvae are present in the stomach of horses
   1. Gastrophilus intestinalis 2. Musca domestica
   3. Stomoxys calcitrans 4. Glossina palpalis
4. "Green bottle flies" is
   1. Calliphora erythrocephala 2. Lucilia sericata
   3. Phormica regina 4. Chrysomyia bezziana

5 _____fly called called Sheep nasal bot fly
   1. Melophagus ovinus 1. Oestrus ovis
   3. Hypoderma lineatum **3.** Hypoderma lineatum

6 _____called the "tumbu fly" deposits eggs in the sleeping places of man, the larva penetrate into the skin and mature.
   1. Sarcophaga haemorrhoidalis 2. Cordylobia anthropophaga
   3. Wohlfahrtia magnifiea 4. Booponus intonsus

7 _____ fly deposits the larvae in the external ear of man or in sores around the eyes
   1. Sarcophaga carnaria 2. Wohlfahrtia magnifiea
   3. Cordylobia anthropophaga 4. Chrysomyia bezziana

8 _____ are called "Blue bottle flies"
   1. Chrysomyia bezziana 2. Lucilia cuprina
   3. Calliphora pathoni 4.Phormia regina

9 The fly larvae causes "butcher jelly"
   1.Hypoderma bovis 2. Haematobia irritans
   3.Stomoxys calcitrans 4. Musca domestica

10 _____ called the "foot maggot" attacks cattle, goat and lay eggs on the hair along the

cornet.

1. Sarcophaga dux
2. Booponus intonsus
3. Cordylobia anthropophaga
4. Wohlfahrtia magnifiea

11 _____ are called “Screw- Worm fly”

1. Phormia regina
2. Lucilia cuprina
3. Chrysomyia bezziana
4. Calliphora pathoni

12 “D” shaped spiracles present in the fly larva of

1.Oestrus ovis
2. Gastrophillus intestinalis
3. Stomoxys calcitrans
4. Musca domestica

13 Leathery and wingless fly is

1. Oestrus ovis
2. **Melophagus ovinus**
3. Stomoxys calcitrans
4. Hypoderma bovis

14 The blue tongue diseas in sheep is transmitted by

1. Simulium indium
2. Culicoides pattoni
3. Phelebotomus papatasii
4. Tabanus rubidus

15 The filarid worm Onchocera gibsoni in cattle is transmitted by

1. Cullicoides oxystoma
2. Phlebotomus argentipes
3. Tabanus rubidus
4. Haematopota javana

16 The “Potu fly” is a troblesome pest occuring in Himalayan region

1. Culicoides pattoni
2. Phlebotomus argentipes
3. Simulium indium
4. Haematopota roralis

17 _____fly acts as a vector for cutaneous leishmaniosis.

1. Phlebotomus argentipes
2. Simulium indium
3. Culicoides pattoni
4. Phelebotomus papatasii

18 The fly which is carrier for the dengue viruses is

1. Culex pipens
2. Aedes egypti
3. Anapheles culicifacies
4. Culicoides oxystoma

19 The adult fly do not have mandibles and maxillae and the remaining mouth parts are modified to form an apparutus adapted for sucking blood and other fluid.

1. Musca domestica
2. Aedes egypti
3. Tabanus rubidus
4. Haematopota roralis

20 The fly which is important for transmission of “Visceral Leishmaniasis”

1. Musca domestica
2. Phlebotomus argentipes
3. Stomoxys calcitrans
4. Glossian palpalis

21 Bean shaped spiracles in the larvae seen in the fly

1. Gastrophilus intestinalis 2. Musca domestica
3. Stomoxys calcitrans 4. Haematobia exigua

22 The common vector for Trypanosoma evansi is
1. Musca domestica 2. Phlebotomus argentipes
3. Glossian palpalis 4. Tabanus rubidus

23 Urogenital myiasis caused by
1. Musca domestica 2. Fania scalaris
3. Oestrus ovis 4. Gastrophilus intestinalis

24 In the _____ fly mouth parts are pointed forwarded projection with bulbus labium with 'Prestomal teeth'
1. Haematobia irritans 2. Glossina morsitans
3. Oestrus ovis 4. Stomoxys calcitrans

25 Larvae of _____ fly consist of D shaped spiracles with central button and radiating slits.
1. Haematobia exgua 2. Oestrus ovis
3. Gastrophilus intestinalis 4. Stomoxys calcitrans

26 The body louse of poultry occuring on the skin of those parts of the body which are not densely feathered
1.Menocanthus stramineus 2. Menopon gallinae
3. Lipeurus caponis 4. Goniodes gigas

27 The large louse occuring on the body and feathers of the fowl
1. Menocanthus stramineus 2. Goniodes gigas
3. Menopon gallinae 4. Lipeurus caponis

28 _____is the 'wing louse' is a slender, elongated louse occurs on the under side of the large wing feathers of fowls and phesants
1. Lipeurus caponis 2. Goniocotes gallinae
3. Menocanthus stramineus 4. Menopon gallinae

29 The 'Long-nosed' cattle louse, which has an elongated head and body is
1. Lipeureus caponis 2. Haematopinus quadripertusus
3. Solenopotes capillatus 4. Haematopinus eurysternus

30 The 'Short nosed' cattle louse, with a relatively short head and broad thorax and abdomen is
1. Haematopinus quadripertusus 2. Solenopotes capillatus
3. Haematopinus eurysternus 4. Lipeureus caponis

31 The oriental rat flea is associated with the transmission of plague (Yersinia pestis)

1. Ceratophyllus fasciatus 2. Xenopsylla cheopis
3. Pulex irritans 4. Tunga penetrans

32 In Indi**, Leishmania donovani** the cause of Kala-azar is transmitted by
1. Simulium indicum 2. Phlebotomus argentipes
3. Chrysops discalis 4. Tabanus rubidus

33 Yellow fever is transmitted by
1. Culex pipiens 2. Aedes aegypti
3. Anopheles gambiae 4. Anopheles maculipennis

34 The spirochaete Borrelia anserina is transmitted to the fowl by species of
1. Culex 2. Aedes
3. Anopheles 4. Mansoni

35 The strick tight flea of poulty in which female burrows into the skin causing the formation of swellings which may ulcerate
1. Echidnophaga gallinacea 2. Ceratophyllus garei
3. Dasypsyllus gallinulae 4. Certophyllus gallinae

36 The myxomatosis virus affecting rabbits is transmitted by
1. Leptopsylla segnis 2. Spilopsyllus cuniculi
3. Ceratophyllus faciatus 4. Xenopsylle cheopis

37 All fleas have
1. 2 pairs of wings 2. 4 pairs of wings
3. 3 pairs of wings 4. none of the above

38 Simulium spp acts as intermediate host of
1. Babesia spp 2. Diphylidium caninum
3. Anaplasma marginale 4. Leucocytozoon spp

40 Linguatul serrata is found in the naso-pharyngeal region of
1. Dog 2. Cattle and buffalo
3.Sheep and goat 4. Rabbits

41 Tumour like growth and occasionally ulceration in the stomach of equines are caused by
1.Stable fly 2**.** Larvae of Gasterophilus spp
3.Larvae of Oestrus ovis 4. Larvae of Hypoderma spp

42 The larva of Musca domestica is
1. Oligopod 2. Polypod
3. Apodous 4. none of the above

43 Sheep scab is caused by
1. Sarcoptes scabiei 2. Melophagus ovinus

3. Psoroptes spp 4. Oestrus ovis

44 Dark transverse bands on dorsal aspects and rows of small spines on ventral aspect of segments are seen in the larvae of

1.Hypoderma bovis 2.Gasterophilus nasalis

3.Chrysomyia bezziana 4. Oestrus ovis

45 Hyalomma anatolicum transmit

1.Babesia 2. Trypanaosoma evansi

3.Theileria annulata 4. All of the above

46 The winter resting site of first stage larvae of Hypoderma lineatum is:

1. Oesophageal wall 2.Skin

3. Spinal canal 4. None of the above

47 Spinose ear tick in the ears, dogs, sheep, horses, cattle and other mammals

1. Ixodes hexagonus 2. Otobius megnini

3. Rhipecephalus appendiculatus 4. Dermacentor reticulatus

48 The cattle bean tick is

1. Hyalomma anatolicum antolicum 2. Ixodes recinus

3. Rhipicephalus appendiculatus 4. Nosomma monstrosum

49 The vector for Kyasanur forest disease

1. Haemaphysalis spinigera 2. Boophilus annulatus

3. Ixodes ovatus 4. Boophilus microplus

50 The mite which causes ear mange in dog, cat and fox is

1. Notoedres cati 2. Sarcoptes scabiei

3. Demodex canis 4. Otodectes cynotis

ANSWER KEY

1	b	2	b	3	a	4	b
5	b	6	b	7	b	8	c
9	b	10	b	11	c	12	a
13	b	14	b	15	c	16	c
17	d	18	b	19	a	20	b
21	a	22	d	23	b	24	d
25	b	26	a	27	b	28	a
29	a	30	c	31	b	32	b
33	b	34	b	35	a	36	b
37	c	38	d	39	b	40	b
41	b	42	c	43	c	44	d
45	c	46	a	47	b	48	b
49	a	50	d				

VETERINARY PROTOZOOLOGY

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1) Congenital transmission occurs in
   a) Toxoplasmosis b) Amoebiosis c) Giardiosis d) Babesiosis
2) In Leishshmania donovani, the stage seen within the vector is
   a) Amastigote b) Promastigote c) Epimastigote d) Trypomastigote
3) Which of the following cell produces pigments in its host cell
   a) Leishmania b) Haemoproteus c) Babesia d) Theileria
4) Mode of transmission in Theileria annulata through Hyalomma ticks is
   a) Transtadial b) Transovarian c) Prenatal d) Transplacental
5) Stercoraria is the term used for
   a) Anterior station developement b) Pre erythrocytic schizogony
   c) Posterior station development d) Ex – erythrocytic schizogony
6) The sexual reproduction is
   a) Binary fission b) Syngamy c) Budding d) Schizogony
7) Following are the organelle for nutrition in protozoa except
   a) Psuedopodia b) Food vacuole c) Contractile vacuole d) flagella
8) Antrycide prosalt is the drug of choice for
   a) *Babesia equi* b) *Trypanosoma evansi* c) *Babesia bigemina* d) *Giardia lamblia*
9) One of the following protozoans with zoonotic importance
   a) *Histomonas meleagridis* b) *Giardia lamblia*
   c) *Sarcocystis tenella* d) *Tritrichomonas foetus*
10) Toxovac is the vaccine for the control of Toxoplasmosis in
   a) Cattle b) Sheep c) Dog d) Poultry
11) Infection in coccidiosis is by the ingestion of
   a) Merozoite b) Spororzoite c) Sporulated oocysts d) Unsporulated oocyst
12) Modified Zeihl Neilson's staining method is specifically used for diagnosis of
   a) Neosporosis b) Sarcocystis c) Toxoplasmosis d) Cryptosporidiosis
13) One of the following is used for staining of the intestinal protozoan parasites
   a) Iodine solution b) Giemsa c) 33% ZnSO 4 d) Caramine
14) The drug of choice for Entamoeba histolytica
   a) Metronidazole b) Oxytetracyclins c) Antrycide prosalt d) Amprolium
15) Definative hosts for *Isospora revolta*

a) Dog b) Cat c) Goat d) Rabbit

16) The vaccine Rakshavac –T is prepared form

a) Sporozoite b) Piroplasmss infected RBC

c) Schizont infected lymphocytes d) Sporoblast

17) Small free flagellum and short undulating membrane is seen in

a) Promastigote b) Epimastigote c) Trypomastigote d) Amastigote

18) One of the following infect caecum

a) *Sarcocystis tenella* b) *Eimeria tenella*

c) *Isospora revolta* d) *Entamoeba histolytica*

19) Eimeria zuernii causes

a) Red dysentery b) Red water disease

c) Heart water disease d) Rectal coccidiosis

20) Rainey's corpsules are associated with

a) Toxoplasma sp b) Sarcocystis sp c) Coccidia sp d) Isospora sp

21) Parasitic protozoa are classified under the kingdom

a) Monera b) Protista c) Animalia d) Plantae

22) The organelle of locomotion of Balatidium coli is

a) Flagella b) Psuedopodia c) Cilia d) None

23) Trypanosoma equiperdum is transmitted by

a) Biting flies b) Ticks c) Coitus d) None

24) Halter shaped gamounts in the erythrocytes are seen in

a) *Leucocytozoon simondi* b) *Plasmodium gallinaceum*

c) *Anaplasma marginale* d) *Haemoproteus columbae*

25) Kinetoplast is nothing but a flattened part of

a) Nucleus b) Blepharoplast c) Mitochodria d) Golgi body

26) The term maltese cross is associated with

a) *Babesia bigemina* b) *B. bovis* c) *B. caballi* d) *B.equi*

27) Which of the following protozoa have no cystic stage in its life cycle

a) *Trictrichomonas foetus* b) *Histomonas meleagridis*

c) *Tetratrichomonas gallinarum* d) All of the above

28) The infective stage of Toxoplasma gondii for an intermediate host is

a) Tachyzoites b) Bradyzoites c) Sporulated oocysts d) All

29) Button shaped punched necrotic ulcers in the abomasum of cattle is characteristic PM lesion of

a) Theileriosis b) Tritrichomonosis c) Surra d) Babesiosis

30) Ingestion of infected tick is the mode of infection of

a) *Babesia canis* b) *Hepatozoon canis* c) *Ehrlichia canis* d) All of the above

31) Traveller's diarrhoea is caused by

a) Cryptosporidia spp b) Trichinella spp c) whipworms d) Giardia spp

32) Father of protozoology

a) Fransesco Redi b) Theobald Smith c) Tyzzer d) Antony Van Leuvenhoek

33) Hepatic coccidiosis in rabbits caused by

a) *Eimeria bovis* b) *Eimeria stiedai*

c*) Eimeria intestinalis* d) *Eimeria gorakhpuri*

34) Infectious catarrhal enteritis is caused by

a) *Hexamita meleagridis* b) *Histomonas meleagridis*

c) *Sarcoccystis neurona* d) *Giardia lamblia*

35) Identify the zoonotic trypanosome

a) *Trypanosoma evansi* b)*Trypanosoma theileri*

c) *Trypanosoma cruzi* d) *Trypanosoma equiperdum*

36) Balck head disease is caused by

a) *Histomonas meleagridis* b) *Hexamita meleagridis*

c) *Sarcoccystis neurona* d) *Giardia lamblia*

37) Entamoeban protozoon having only one nucleous

a) *Entamoeba histolytica* b) *Entamoeba coli* c) *Entamoeba bovis* d) None

38) Flask shaped ulcers is characteristic feature observed in

a) *Giardia lamblia* b) *Entamoeba histolytica*

c) *Cryptosporidium* spp d) *Eimeria bovis*

39) Equine protozoan myeloencephalitis is caused by

a) *Babesia equi* b) *Sarcocystis neurona* c) *Toxoplasma gondii* d) None of these

40) Zismanna's stippling was observed in

a) *Plasmodium malariae* b) *Plasmodium ovale* c) *Plasmodium gallinaceum*

d) *Plasmodium simium*

41) Transovarian transmission is seen in

a) Babesiosis b) Theileriosis c) Both a and b d) None of these

42) Tropical theileriosis is caused by

a) *Theileria parva* b) *Theileria annulata* c) *Theileria mutans* d) None

43) Sulphur yellow colored droppings are observed in

a) Histomonosis b) Hexamitosis c) Giardiosis d) Balantidiosis

44) Xenodiagnosis is used in

a) Chagas disease b) Surra c) Dourine d) Kalaazar

45) Koch blue bodies are seen in

a) Lymphocytes b) Monocytes c) Plasma cells d) T – cells.

46) Dollar spots in flank region of horses are caused by

a) *Trypanosoma evansi* b) *Trypanosoma theileri* c) *Trypanosoma cruzi*

d) None of these

47) Thrombocytopenia in dogs is caused by

a) *Hepatozoon canis* b) *Babesia canis* c*) Ehrlichia canis* d) None of these

48) Circling movements in buffaloes is caused by

a) *Theileria annulata* b) *Sarcocystis neurona* c) *Giardia lamblia*

d) *Trypanosoma evansi.*

49) Sporulating agent used in sporulation of unsporulated oocysts of coccidian sp. Is

a) 5 % Potassium dichromate b) 2.5 % Potassium dichromate

c) 7.5 % Potassium dichromate d) 10 % Potassium dichromate.

50) Sabin fieldman's test is used for diagnosis of

a) Toxoplasmosis b) Theileriosis c) Babesiosis d) Sarcocystosis.

ANSWER KEY

1	a	2	b	3	a	4	a
5	c	6	b	7	d	8	b
9	b	10	b	11	c	12	d
13	a	14	a	15	b	16	c
17	c	18	b	19	a	20	b
21	b	22	c	23	c	24	d
25	c	26	d	27	d	28	d
29	a	30	b	31	d	32	d
33	b	34	a	35	c	36	a
37	c	38	b	39	b	40	a
41	a	42	b	43	a	44	a
45	a	46	d	47	c	48	d
49	b	50	a				

VETERINARY PUBLIC HEALTH AND EPIDEMIOLOGY

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1. Tuberculin test is

a) Precipitation test b) Agglutination test c) Hypersensitivity reaction test d) None

2. Man gets infected with Hydatidosis-a cyclozoonotic disease from;

a) Dog b) Sheep c) Cattle d) Fish

3. Cold blooded vertebrates are associated with the zoonotic infection

a) Swimming pool granuloma b) Swimmers itch c) Cercarial dermatitis d) none

4. Which of the following is not ubiquitous?

a) *Salmonella* b) *E. coli* c) *staphylococcus* d) *Bacillus anthracis*

5. Leptospirosis is an example of

a) Anthropozoonosis b) Direct zoonosis c) Water borne zoonosis d) All

6. Chickungunya fever is a metazoonosis caused by

a) Alphavirus b) Flavivrus c) Orbivirus d) Bunyavirus

7. Candidiasis is a

a) Mycotic zoonosis b) Bacterial zoonosis c) Viral zoonosis d) Parasitic zoonosis

8. Straus test is used for the diagnosis of following disease

a) leptospirosis b) brucellosis c) anthrax d) straus disease

9. Rabies is classified under

a) Direct zoonosis b) Metazoonosis c) Cyclozoonosis d) Saprozoonosis

10. The type of zoonosis to which Cercarial dermatitis belongs is

a) cyclozoonosis b) euzoonosis c) saprozoonosis d) saprometazoonosis

11. The disease in humans which can be diagnosed by using Coombs' test is

a) Tuberculosis b) Brucellosis c) Q fever d) Anthrax

12. Which species is assumed to be acting as mixing vat for influenza viruses?

a) Swine b) Ovine c) Chicken d) Equine

13. Which disease can be diagnosed by observing McFadyean reaction?

a) Tuberculosis b) Brucellosis c) Q fever d) Anthrax

14. Which of the species is resistant to leptospirosis?

a) Swine b) Ovine c) Chicken d) Equine

15. Swimming pool granuloma in humans is caused by

a) *Mycobacterium platypoecilus* b) *Mycobacterium balnei*

c) *Mycobacterium xenopei* d) *Mycobacterium avium*

16. The per capita availability of milk per day in India is

a. 220 gm b. 243 gm c. 283 gm d. 263 gm

17. As per the BIS standards, in very good type of raw milk, the SPC/ml of milk should be

a. > 50 lakhs b. 2-10 lakhs c. < 2 lakhs d. 10- 50 lakhs

18. The microflora survive at 55-70^{0}C are known as

a. Mesophilic b. Thermoduric c. Thermophilic d. Psychrophilic

19. Choose the following test which indicate the susceptibility of milk to heat processing and its keeping quality

a. Sediment test b. Clot on boiling test c. p^H d. Alcohol-alizarin test

20. Ropiness of milk is caused due to

a. *E.coli* b. *Cl. butyricum* c. *Bacillus cereus* d. *Alcaligens viscolactis*

21. An indicator organism for efficient pasteurization is

a. *Sal.typhi* b. *Cl. Perfringes* c. *Listeria monocytogenes* d. *C. burnettii*

22. The milk borne zoonosis (es)

a.Tuberculosis b. Brucellosis c. TBE d. All

23. The platform tests employed for raw milk are primarily meant for testing

a .Spoilage b. Keeping quality c Heat stability d. All

24. LP system present in bovine milk has

a. $H_2 O_2$ b.CO_2 c.NO_2 d.All

25. Lactoferin is a

a .Probiotic b. Antibiotic c. Antidote d. None

26. Raw milk showing more than 5 hrs of dye reduction time is of

a. Poor quality b. Good quality c. Fair quality d. Very poor

27. Lactic acid bacteria mainly comprises of species of

a. *Lactobacillus and Streptococcous* b. *Lactobacillus and Bacillus*

c .*Lactobacillus and Micrococcus* d. All

28. Person to person transmission of infection via the food is commonly seen in

a.Salmonellosis b. Yersiniosis c.Campylobacteriosis d. All

29. Priliminary incubation count is done to facilitate the enumeration of

a. Thermophiles b. Psychrophiles c. Mesophiles d. None

30. The principal domestic reservoir in the transmission cow pox to humans is

a) Rodents b) Cat c) cattle d) All

31. Malignant pustle is a synonym for

a) Brucellosis b) Glanders c) Anthrax d) All

32. Rabies in bats is common in

a) America b) Australia c) Antartica d) All

33. Which is not a zoonotic disease?

a) Cow pox b) Pseudo cow pox c) Sheep pox d) Monkey pox

34. The headquarters of FAO is in

a) Rome b) Geneva c) New york d) London

35. Bifidus factor is present in

a) Bovines b) Ovines c) Caprines d) Humans

36. Nephelometer is used to measure

a) Turbidity of water b) Flavor of water

c) Color of water d) Bacterial count in water

37. Post pasteurized milk's quality is tested by

a. Phosphatise test b. Methylene blue test c. Catalase test d. Oxidase test

38. Fish contains all except

a. Iodine b. Iron c. Calcium d. Phosphate

39. Bio safety level 3 in included for all diseases except

a. Coxiella burnetti b. TB c. Influenza d.St Louis encephalitis

40. In a screening test in community level, if false positive levels are more it indicates

a. High sensitivity b. High specificity

c.Prevelance is low d. Prevelance is high

41. Incineration done in all except

a. Sharp waste b. Solid waste c. cytotoxic waste d. Anatomical waste

42. Regarding BCG vaccine which is true

a. Normal saline or distilled water is used for reconstituition

b. Who recommends danish1331 strain for vaccine production

c. Injection site is cleaned by spirit

d. BCG scar is formed definitely after 6 months

43. Regarding prion protein which of the following is true

a. It is a protein product coded in viral DNA

b. catalyses abnormal folding of other proteins

c. Protect disulfide bonds from oxidation

d. Cleaves normal proteins

44. Plasmodium falciparum is diagnosed by

a. HRP 1 b. LDH c. Immuno chromato graphy d. Aldolase

45. Dengue diagnosis best sensitivity by

a. IgM ELISA b. CFT c. Tissue Culture d. Electron microscopy

46. All are RNA viruses except

a. Ebola b. Rabies c. Simian virus 40 d. Vesicular stomatitis virus

47. Which of the following may lead to a reemerging disease?

a) Changes in the host population b) Changes in the environment

c) Alternations in the pathogen d) all of the above

48. Anisakiasis is a

a) Fish borne zoonosis b) Vector borne zoonosis c) Saprozoonosis d) all

49. Tick borne encephalitis (type IV metazoonosis) - the transmission of the infectious agent is obligatory between

a) Tick to tick b) Sheep to sheep c) Tick to sheep d) All

50. Giardiasis is an example of

a) Anthropozoonosis b) Zooanthroponosis c) Amphixenosis d) All

51. The larvae of chrysomia species cause (in humans)

a) Cutaneous larvae migrans b) Visceral larvae migrans

c) Myiasis d) Cercarial dermatitis

52. Milk ring test is done to detect

a) Mastitis b) Brucellosis c) Q-fever d) All

53. *Ricketsia typhi* causes

a) Endemic typhus b) Scrub typhus c) Typhoid d) All

54. Meat tenderness is not related to

a) Age of the animal b) Growth hormone supplementation

c) Fat content of the meat d) Glycogen content of the meat

55. Lobulated lymph nodes are characteristic of

a. Horse b. Cattle c. Pig d. Goat

56. Marbling is rich in

a. Horse meat b. Chevon c. Mutton d. Rabbit meat

57. Rate and extent of lactic acid formation in meat determines

a. Rigor mortis b. Proteolysis c. Tenderness d. All

58. Muscle shortening incidence in meat can be reduced by

a. Chilling b. Freezing c. Stunning d. Pithing

59. Venison is a meat of

a. Camel b. Fox c. Deer d. Elephant

60. Ante mortem inspection fails to detect

a. Tuberculosis b. Brucellosis c. Salmonellosis d. Hydatidosis

61. Post mortem inspection fails to detect

a. Pertitoneal abscess b. JD c. TB d. Tetanus

62. The essential amino acid present in the milk which gets converted to niacin is

a. Methionin b. Lysine c. Cysteine d. Tryptophan

63. Milk calcium occurs in the form of

a. Calcium phosphate b. Calcium casienogenate c. Calcium casienolysate d. All

64. Shortest incubation period usually occurs in the food poisoning

a. B. cerius b. Cl. Botulinum c. Cl. Perfringenes d. Staph. aureus

65. Infected food handlers often become responsible for food poising outbreak with

a. Salmonellosis b. Staphylococcosis c. Yersiniosis d. All

66. Turbidity test is used to test

a. UHT milk b. Boiled milk c. Sterilized milk d. All

67. Adulteration of milk with water can be detected by

a. Specific gravity b. Freezing point c. Nitrates d. All

68. White side test is used to detect

a. Mastitis b. Starch in milk c. Animal fat in ghee d. None

69. Hot water used for disinfection of milk plant should have temperature of

a. 70°C b. 75°C c. 80°C d. 90°C

70. If milk is adulterated with water, the boiling point of milk

a. Increases b. Decreases c. Remains constant d. None

71. Colostrum is rich source of

a. Water b. Maltose c. Immunoglobins d. Amino acids

72. Milk contains following constituents

1. Protein 2. Water 3. Lactose 4. Minerals

The correct sequence in descending order in terms of their proportion in milk is

a. 4,3,2,1 1,2,3,4 2,1,3,4 2,3,1,4

73. All of the following are true about rabies except

a. It is caused by Rhabdovirus.

b. Hydrophobia is an early symptom.

c. The reservoir is mainly rodents.

d. Diagnosis is based on immunofluorescent techniques.

e. It is not fatal in bats.

74. The most effective control of a vectorborne disease is

a. Treatment of infected humans. B. Treatment of infected wild animals.

c. Elimination of the vector. D. Avoidance of endemic areas.

75. All of the following are requirements for an outbreak of botulism except

a. Killing bacteria that compete with Clostridium

b. An anaerobic environment.

c. An incubation period.

d. A nutrient medium with a pH below 4.5.

76. All of the following are caused by prions except

a. Sheep scrapie. b. Kuru. c. Creutzfeldt-Jakob disease.

d. Transmissible mink encephalopathy. e. Rabies.

77. A diagnosis of rabies is confirmed by

a. Gram stain. b. Direct fluorescent-antibody test.

c. Patient's symptoms. d. Passive agglutination.

78. A vaccine is available for all of the following except

a. Haemophilus meningitis b. Neisseria meningitis

c. Rabies. d. Botulism.

79. The following diseases can be transmitted to humans by pigeons except

a. Salmonellosis b. Listeriosis c. Yersiniosis d. Brucellosis

80. The larvae of *Ancylostoma* cause

a. Cutaneous larvae migrans b. Visceral larvae migrans

c. Brain larvae migrans d. Migraine

81. Haemolytic uraemic syndrome in humans is caused by

a. Salmonella b. Staphylococcus c. E.coli d. Streptococci

82. Jap. Enceph in humans is caused by

a. Alphavirus b. Flavivirus c Togavirus d. Herpesvirus

83. Which of the following zoonotic diseases is prevalent in Asia

a. Jap. Enceph b. Lassa fever c Louping ill d. Monkey pox

84. Psittacosis is caused by

a. Chlamydia psittaci b. *Rickettsia psittaci*

b. *Coxiella psittaci* d. *Mycoplasma psittac*

85. The reservoir animal for Relapsing fever caused by *Borrelia recurrentis* is

a. Cattle b. Cat c Rodent d. Snake

86. Tick borne encephalitis is caused by

a. Flavivirus b. Alphavirus c Streptococcus d. Listeria

87. The reservoir animal for Trichinellosis is

a. Only pig b. Pig and rodents c All mammals d. Mammals and fishes

88. The reservoir animal for *Mycobacterium bovis* is

a. Cattle b. Seals c Both d. None

89. Humans act as dead end hosts for the following except

a. Rabies b. Anthrax c Salmonellosis d. West Nile virus

90. Elephantiasis caused by *Wuchereria bancrofti* is

a. Zooanthroponosis b. Anthropozoonosis c Not a zoonosis d. None

91. Meat borne illness can be acused byu

a. Ingestion of infectious agents along with the food
b. Ingestion of exotoxins along with the food
c. Pesticides or medicines in food
d. All of the above

92. Carcass yield is also known as

a. Killing out percentage b. Dressing percentage c Both d. None

93. The carcass yield in cattle denotes

a. The weight of the two sides of beef
b. The weight of the two sides of beef including kidney
c. The weight of the two sides of beef including kidney and head but minus skin, blood, fat and viscera
d. None

94. The intensity of the light required in inspection areas of an abattoir is

a. 500 lux b. 540 lux c. 450 lux d. 400 lux

95. The pH required for good quality meat is

a. Final Ph b. Optimal pH c. Both are same d. None

96. O-toluedine test is used to detect

a. Chlorine in water b. Flourine in water c. Iodine in water d. None

97. Carbon filtration is used to remove

a. Chlorine from water b. Radioactive substances from water
c . Both d. None

98. West Nile fever is transmitted by

a. Tick b. Flea c.. Mosquito d. None

99. Humans can get affected with glanders from

a. Cattle b. Pig c. Horse d. Pigeon

100. Which among the following is highly pathogenic to humans?

a. B. abortus b. *B. melitensis* c. *B. suis* d. *B.canis*

101. Luoto test is used for the diagnosis of

a. Brucellosis b. Tuberculosis c Q fever d. Psittacosis

102. Wool sorter's disease is

a. Cutaneous form anthrax b. Pulmonary form anthrax

c Intestinal form anthrax d. None

103. Eschar is a synonym for

a. Cutaneous form anthrax b. Pulmonary form anthrax

C Intestinal form anthrax d. None

104. Eschar is a synonym for

a. Brucellosis b. Tuberculosis c . Q fever d. Anthrax

105. Ascoli's test is used for the diagnosis of the following zoonosis

a. Brucellosis b. Tuberculosis c .Q fever d. Anthrax

106. Epizootic abortion in animals is caused by

a. Brucella b. *M. tuberculosis* c .Q fever agent d. *Bacillus anthracis*

107. Majority of gas gangrene in humans is caused by

a. *C. perfringenes* b. *C. septicum* c . *C. novyi* d. All

108. Colibacillosis is caused by

a. Salmonella b. *E.coli* c. Proteus d. Klebsiella

109. The reservoir of *E.coli* O157:H7 is

a. Cattle b. Sheep c. Goat d. Pig

110. The most common *E.coli* strain isolated from meat poisoning cases in humans is

a. O157:H7 b. O7:H157 c O100:H7 d. O157:H1

111. Mouse inoculation test is used mainly for

a. To diagnose rabies

b. To test the efficacy of the vaccine against rabies

c. To treat patients with rabies

d. None of the above

112. The mosquito which transmits dengue fever is

a. Aedes species b. Anopheles species

C Dengue is not transmitted by mosquitoes d. Dengue is not a vector borne disease

113. ganjam virus disease is a

a. Mosquito borne disease b. Tick borne disease

C Flea borne disease d. Fly borne disease

114. Which of the following is true

a. New castle disease is a occupational zoonosis

b. Humans get the infection New castle disease during the vaccination of birds

c. New castle disease causes conjunctivitis in humans

d. All of the above

115. Q fever is an example for

a. Direct zoonosis b. Metazoonosis c Both d. None

116. The vector involved in the transmission of q fever is

a. Tick b. Mosquito c Flea d. Fly

117. Man gets infection of Q fever by

a. Consuming raw milk of an affected animal b. Through vectors

c By handling the uterine discharges of an affected animal d. All of the above

118. With regard to Q fever which is correct

a. Agent undergoes TOT in ticks b. Agent undergoes TST in ticks

c Both d. None

119. Stomoxys flies transmit anthrax

a. Mechanically b.Biologically

c They will not transmit anthrax d. None of the above is correct

120. Lyme disease is caused by

a. Borrelia spp. b. Bartonella spp. c Brucella spp. d. Bacillus spp.

121. The reservoir hosts for *L. icterohaemorrhagiae* are

a. rats b. Dog c. cattle d. pigs

122. Rice field workers disease is a synonym for the disease

a. Brucellosis b. Listeriosis c. Leptospirosis d. Japanese Encephalitis

123. The Leptospiruria state in rates varies between

a. 7 days-30 days b. throughout life c. upto one year d. 120 - 700 days

124. Periodic Opthalmia in horse is observed in

a. Listeriosis b.Strongylosis c. Tuberculosis d. Leptospirosis

125. The test considered as gold standard as per OIE for diagnosis of Leptospirosis is

a. Dark field Microscopy b. Silver impregnesion of Levoditti stain

c. Microscopic agglutination test d. Culture and identification.

126. On semisolid / liquid medium the characteristic Dinger's ring observed in the growth of

a. *B. Anthracis* b. *M. Paratubrculosis* c. Leptospira spp. d. *E. Coli.*

127. The principle agent of zoonotic tuberculosis is

a. *M. tuberculosis* b. *M. avium* comlex c. *M. marienum* d. *M. bovis.*

128. The country which has eradicated human TB is

a. Australia b. England c. United States. d. none

129. The National TB centre is located at

a. Bangalore b. Delhi c. Bhopal d. Kasoli

130. DOTS strategy has been globally recognized as the best cost effective approach for the control of

a. Leprosy b. Tuberculosis c. Polio d. Measles

131. Tuberculosis is an example for

a. non obligatory cyclo zoonoses b. Meta zoonoses

c. Reverse zoonoses d. sapro zoonoses

132. The causative agent for Fish tank granuloma / swimming pool granuloma is

a. *L. Pomona* b. A. canunum c. *E. granuloses* d. *M.. marinum*

133. Mantoux test is used in the diagnosis of

a. Leptospirosis b. Echynococcosis c. Sarcocystosis d. Tuberculosis

134. World TB day is falls on

a. 24th January b. 24th February C.24th March d. 24th May

135. The disease known as Rag picker's disease is

a. Anthrax b. Tuberculosis

c. Echynococcosis d. Cutaneous Larval Migrain

136. Blackberry Jam consistency of spleen is a pathognomonic change in

a. Echynococcosis b. Q fever c. Leptosporosis d. Anthrax

137. In Brucellosis the infected bulls play as

a. Intermediate host b. Reservoir host c. Dead end host d. Hibernating host

138. Coomb's test is using in the diagnosis of

a. Anthrax b. Neurocysticercosis c. Chrone's disease d. Brucellosis

140. World zoonoses day will fall on

a. 7th July b. 24th March c. 9th November d. 17th October

141.World Rabies day will fall on

a. 17th July b. 24th March c. 9th November d. 28th September

142. Rabies virus transmission from dogs to people is intensified as the density of susceptible dogs exceeds

a. 4.5 dogs / km b. 45.5 dogs / km c. 0.45 dogs / km. d. 455 dogs / km.

143. Injection of Rabies Immunoglobulin is compulsory in

a. Category I bite b. Category II bite c. Category III bite d. None of these

144. the most cost effective vaccines for Rabies for human is

a. Nervous tissue vaccines b. Non nervous tissue vaccines

c. Cell culture vaccines d. None of the above

145. Govt. India has stopped production of nervous tissue vaccine (NTV) of rabies since

a. 31st Dec 2004 b. 31st Jan 2013

c. 31st March 2000 d. Still producing NTV

146. The periodical booster dose of vaccine are recommended if the virus neutralizing antibody titer falls bellow

a. 0. 50IU / ml b. 1.500 IU/ml c. 0.05 IU / ml d 0.005 IU/ ml

147. the prions were discovered by

a. Stanley Prusiner b. Daved Bruce c. Van Pirquit d. Roux

148. Transmissible sub accute dementia is caused by

a. *M. tuberculosis* b. *L. Monocytogenes*

c. *Cysticercus cerebralis* d. Prion proteins

149. the only virus so far detected in India to cause epidemics of encephalitis is

a. Rabies virus b. Dengue fever virus

c. Japanese Encephalitis virus d. Kyasanur Forest disease virus

150. The only domestic species son far known which shows signs of Encepalitis due to Japanese Encephalitis virus is

a. Pigs b. Cattle c. Horse d.Dogs

151. The species which acts as amplifying hosts of Japanese Encephalitis are

a. pigs b. pond herons c. both d. none

152. The species which acts as" mixing vessels" for Influenza are

a. ducks b. pigs c. cattle d. herons

153. The called as Hamburger's disease is

a. *E. coli* O: 157, H: 7 b. Botulism c. Amoebiasis d. cryptosporidiosis.

154. the called as Deer fly fever is

a. Borreliosis b. Trypanosomiasis c.Tularemia d. Nipha virus infection

155. The regional office of WHO for South East Asia is located at

a. Manila Philippines b. New Delhi c. Colombo d.Geneva

156. World Organisation for animal Health is located at

a. Geneva b. Rome c. Paris d. London

157. The National Institute of Communicable Disease is located at

a. Delhi b. Bhuvaneshwar. c. Kasauli d. Pondicherry.

158. A zoonoses with long history is called

a. xenozoonoses b. direct zoonoses c. lingering zoonoses d.reverse zoonoses

159. Taeniasis is an example for

a. Euzoonoses b. Perefect zoonoses c. cyclozoonoses d. all the above

160. the disease known as Darling's disease is

a. Histoplasmosis b. camydiosis c. coccidiomycosis d. . Botulism

161Casoni's test is conducted for the diagnosis of

a. Anthrax b.Toxoplasmosis c. Hydatidosis d. Cysticercosis

162. Levinthol- Colli- Lilli bodies were seen in the infection with

a. Trypanosomiasis b. clamydiosis c. Cryptosporidiosis d. toxoplasmosis

163. Salt content of sea water is

a.2.5% b. 3.5% c. 4.5% d. 5.5%

164. The water (prevention and control of pollution) act was passed in the year

a. 1067 b. 1974 c. 1982 d. 1986

165. The heart of the slow sand filter is

a. Sand bed b. Vital layer c. Venturimeter d. Under drainage system

166. The dose of alum added in rapid sand filter is

a. 1-5mg/lit b. 5-40mg/lit c. 50-80mg/lit d.100-150mg/lit

167. The disinfecting action of chlorine is mainly due to

a. HOCl b. Hcl c. H D. OCl

168. The action of chlorine is unreliable when pH of water exceeds

a. 7.5 b. 9.0 c. 8.5 d. 8.0

169. Available chlorine in perchlorine or High test hypochlorite is

a. 30-40% b.40-50% c.50-60% d. 60-70%

170. Available chlorine in bleaching powder is

a. 22% b.33% c.44% d.55%

171. The drawback of ozone while disinfecting water is

a. No residual effect b. No bactericidal effect

c. No viricidal effect D. No oxidizing effect

172. Maximum permissible limit of chlorides is

a. 200mg/lit b.400mg/lit c. 600mg/lit d.800mg/lit

173. The rotten egg smell of the water is due to

a. Iron b. H_2S c. Ammonia d. Zinc

174. Recent fecal pollution of water is indicated by detection of

a. *E. coli* b. *Streptococci spp* c. *Cl. Perfringens* d. *Salmonella spp.*

175. Sling psychrometer is used to measure

a. Humidity b. Wind speed C. Wind direction d, Atmospheric pressure

176. Defoluridation of water can be done by using

a. Sulphates b. Carbonates c. Phosphates d. Bicarbonates

177. In sewage treatment process zoogleal layer is found in

a. Grit chamber b. Triclkling filters

c. Activated sludge process d. Sludge digestion tank

178. Siderosis is caused by

a. Coal dust b. Silica c. Asbestos d. Iron

179. Byssinosis is caused by

a. Cane fibre b. Cotton dust c. Tobacco d. Hy dusy or grain dust

180. Farmer's lung is caused by

a. Sililca b. Asbestos. C. Hay or grain dust d. Asbestos

181. The Air(Prevention and control of pollution) act was passed in the year

a. 1951 b. 1961 c. 1971 d. 1981

182. The best method of disposal for medical waste is

a. Dumping b. Incineration c. Composting d. Burial

183. Equipment used to know wind direction is

a. Wind wane b. Anemometer c. Sling psychrometer d. Barometer

184. The *E.Coli* count of water intented for drinking purpose is

a. 0 in 100 ml of water b. 1 in 100 ml of water

c. 10 in 100 ml of water d. 100 in 100 ml of water

185. The drinking water should be

a. Soft b. Moderately hard c. Hard D. Very hard

186. Boiling of water can remove

a. Temporary hardness b. Permanent haardnes c. Both d. none

187. The level of CO_2 in air is

a. 0.003 % b. 0.03% c.0.3% d. 3%

188. The present unit of measurement of activity of radioactive material is

a. bequerrel b. Curie c. Roentgen d. Rad

189. The guideline value for fluoride content in water is

a. 0.5% b. 1.5% c. 23.5% d. 3.5%

190. The basic physiological water requirement per person is

a. 2 lit/day b. 4 lit/day c. 5 lit/ day d. 6 lit/day

ANSWER KEY

1. c 2.a 3.a 4.d 5.d 6.b 7.a 8. b 9.a 10.d 11.b 12. a 13. d 14. c 15. b 16. b 17. c 18. b 19. b 20. d 21. d 22. d 23. d 24. a 25. d 26. b 27. a 28. d 29. b 30. a 31. c 32. a 33. c 34. a 35. d 36. a 37. a 38. b 39. c 40.c 41. a 42. b 43. b 44. a 45. a 46. c 47.d 48. a 49. a 50. b

51. c 52. b 53. a 54. b 55. c 56. a 57. d 58. c 59. c 60. d 61. d 62. d 63. a 64. b 65.d 66. d 67.d 68. a 69.c 70. b 71. c 72. d 73. c 74. c 75. c 76.e 77. b 78. d 79. d 80. a 81. c 82. b 83. a 84. a 85. c 86. a 87. c 88. c 89. c 90.c 91. d 92. c 93. c 94. b 95. c 96. a 97. b 98. c 99. c 100. b

101. c 102. b 103. a 104.d 105. d 106. a 107. d 108. b 109. a 110. a 111. b 112. a 113. b 114. d 115. c 116. a 117. d 118. c 119. a 120. A 121 a. 122 c. 123 b. 124 d. 125 c.126 c. 127 d. 128 d. 129 a. 130 b. 131 c. 132 d. 133 d. 134 c. 135 a. 136 d. 137 c. 138 d. 140 a. 141 d. 142 a. 143 c. 144 c. 145 a. 146 a. 147 a. 148 d. 149 c. 150 c.

151 c. 152 b. 153 a. 154. C. 155 b. 156 c. 157 a. 158 c. 159 d. 160 a. 161 c. 162 b. 163. b 164. b 165. b 166. B 167.a 168.c 169.d 170.b 171.a 172. C cv173.b 174. b 175. a 176.c 177.b 178.d 179.b 180.c 181.d 182.b 183.a 184.a 185.b 186.a 187.b 188.a 189.b 190.a

VETERINARY MEDICINE - I

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1. 'Tall R' wave in ECG denotes

a. Bilateral ventricular enlargement b. Left ventricular enlargement

c. Bilateral atrial enlargement d. Right ventricular enlargement

2. Tigroid heart is pathognomonic lesion in

a. FMD b. Rinder pest c. Bluetongue d. PPR

3. Haemoptysis means presence of blood in

a. urine b. sputum c. vomitus d. stools

4. Lactation tetany in cattle is due to

a. hypoglycemia b. hypomagnesaemia c. hypocalcemia d. hypophosphataemia

5. Iron deficiency anaemia is more common in

a. Calves b. Lambs c. Piglets d. Puppies

6. Hydrocyanic acid (HCN) poisoning is results in

a. Anoxic anoxia b. Anaemic anoxia c. Histotoxic anoxia d. Stagnant anoxia

7. The antidote for Organophosphate poisoning is

a. Atropine sulphate with oximes b. Calcium borogluconate

c. Methylene blue d. Sodium thiosulphate

8. Significant amount of delta bilirubin in plasma suggests

a. Acute hepatitis b. Heaptic necrosis c. Cholestasis d. Cirrhosis

9. Which of the following Apex body regulates Prevention of cruelty in India?

a. PETA b. WSPA c. SPCA d. AWBI

10. Goose stepping in pigs is characteristic sign of

a. Thiamin deficiency b. Calcium deficiency

c. Pantothenic acid deficiency d. Phosphorus deficiency

11. Peat scours in caves is due to deficiency of

a. Calcium b. Selenium and Vit. E c. Copper d. Cobalt

12. Eclampsia in mares is caused by

a. Hypoproteinemia b. Hypophosphatemia c. Hypomagnesemia d. Hypocalcemia

13. Which of the following is having high therapeutic value in gastric ulcers of dogs?

a. Sucralfate b. H_1 blockers c. Cisapride d. Metoclopramide

14. The most common cause of urolithiasis in canines is

a. Weddelite uroliths b. Xanthin uroliths

c. Hydroxyapatite uroliths d. Struvite uroliths

15. Which of the following is a antiketogenic volatile fatty acid for ruminanats

a. Acetic acid b. Butyric acid c. Propionic acid d. Succinic acid

16. Which of the following has high therapeutic index in acute renal failure?

a. Vasopressin b. Frussemide c. Spironolactones d. Dopamine

17. Polioencephalomalacia is due to deficiency of

a. Riboflavin b. Thiamin c. Niacin d. cyanocobalamine

18. Inflammatory Bowel Disease in dogs is suspected to be due

a. Defective immunoregulation b. Dietary allergens

c. Eosinophillic gastroenteritis d. All of the above

19. Papple shaped abdomen is characteristic of

a. Traumatic reticuloperitonotis b. Abaomasal displacement

c. Omasal impaction d. Vagal indigestion

20. Acute Bovine Pulmonary Emphysema and Edema (ABPEE) is due to

a. Dietary high L-tryptophan b. Lung worm infestation

c. Prolonged transit d. Mycotoxins

21. Glomerulonephritis in canines is essentially

a. Sequalae of nephroliths b. Auto-immune disease

c. Sequalae of interstitial nephritis d. None of the above

22. Ovine ketosis is also referred as

a. Pregnancy toxemia b. Twin lamb disease

c. Acetonemia of sheep d. All of the above

23. Barker foal syndrome is due to

a. Antenatal or postnatal hypoxia b. Isoimmune hemolytic anaemia

c. Clostridial infection d. Premature foaling

24. Bulk Tank Milk Somatic Cell Count suggestive of mastitis in the herd is

a. 2,00,000/ml b. 2,50,000/ml c. 3,00,000/ml d. 1,50,000/ml

25. Persistent ruminal tympany, bradycardia and displaced heart sounds in cattle suggests

a. Traumatic Pericarditis b. Traumatic reticulitis

c. Diaphramatic hernia d. Traumatic reticulo-peritonitis

26. Palliative treatment of a disease means

a. To prolong the life b. Specific therapy

c. Eliminate etiology d. Symptomatic therapy

27. Pollakyuria means

a. Excessive urination b. Frequent painful urination

c. Constant dribbling of urine d. Decreased output of urine

28. Stranguria means

a. Frequent painful urination b. Urination with abnormal constituents

c. Constant dribbling of urine d. Decreased output of urine

29. Dysuria means

a. frequent painful urination b. Difficulty in urination

c. Constant dribbling of urine d. No urination

30. Azotemia means

a. Excessive accumulation of NPN b. Uraemia

c. Both a & b d. Decreased levels of NPN

31. Stagnant hypoxia is seen in

a. HCN poisoning b. Nitrite poisoning

c. Congestive heart failure d. Lead poisoning

32. Haematochezia means presence of blood

a. in vomitus b. in sputum c. in nasal discharge d. in faeces

33. Paper crackling rales on auscultation is suggestive of

a. Pneumonia b. Bronchitis

c. Pulmonary emphysema d. Pulmonary oedema

34. Hydrothorax is commonly seen in horses suffering from

a. Strangles b. African horse sickness

c. Equine influenza d. Equine infectious anaemia

35. Acute bovine pulmonary emphysema and edema (*ABPPE)* is caused by

a. Excessive feeding of silage b. Excessive feeding of lush greens

c. Feeding of moldy hay d. Excessive feeding of roughages

36. Dalmatian breed of dogs have inherent tendency to develop

a. Calcium oxalate uroliths b. Triple phosphate uroliths

c. Ammonium urate uroliths d. struvite uroliths

37. Systolic and diastolic murmur on auscultation is suggestive of

a. Myocarditis b. Pericarditis

c. Patent ductus arteriosus c. Vegetative endocarditis

38. Which of the following is considered a Standard Lead for ECG recording

a. Lead I b. Lead II c. Lead III d. None

39. In general, colloidal osmotic pressure at arterial end is

a. 45 mm of Hg b. 15 mm of Hg c. 30 mm of Hg d. None

40. Diaphragmatic hernia is more common in

a. Cows b. Buffaloes c. Bullocks d. Sheep

41. Case fatality rate is as high as 50 per cent in

a. Type I abomasal ulcers b. Type II abomasal ulcers

c. Type III abomasal ulcers d. Type IV abomasal ulcers

42. Increased frequency, tenesmus with presence of abundant mucus in faeces is suggestive of

a. Small bowel diarrhea b. Large bowel diarrhea

c. Exocrine pancreatic insufficiency d. None of the above

43. Which among the following is an osmotic diuretic

a. Frussemide b. Spironolactones c. Dopamine d. Mannitol

44. Which of the following is a respiratory stimulant

a. Theophylline b. Guaifenesin c. Bromohexine d. Doxapram

45. Which of the following is opioid analgesic

a. Indomethacin b. Flunixin meglumine c. Acetaminophen d. Pentazocine

46. Which of the following is a promising ACE inhibitor for dilated cardio-myopathy in dogs

a. Digitalis b. Amiodipine besylate c. Atenolol d.Enalapril maleate

47. Effective thyroxine dose for canine hypothyroidism is

a. 0.2 – 0.4 mg/kg b. 0.02 -0.04 mg/kg c. 0.002 – 0.004mg/kg d. 2 – 4 mg/kg

48. Diabetic cataract is due to accumulation of which of the following in lens capsule

a. Insulin b. Sorbitol c. Isopropanol d. Ketoacids

49. Trypsin like immunoreactivity (TLI) assay in dogs is highly sensitive and specific test for

a. Inflammatory Bowel Disease b. Acute Pancreatitis

c. Exocrine pancreatic insuffiency d. Large bowel disease

50. Which of the following is used as hyperosmotic cathartic to cleanse the bowel

a. Bisacodyl b. Psyllium husk c. Docusate sodium d. Lactulose

51. Metabolic acidosis can occur in

a. Severe Diarrhoea b. Intestinal obstruction

c. Impactive colic d. All of the above

52. ‘Gag reflex test’ is performed to know the functional ability of

a. Glossopharyngeal nerve b. Vestibulocochlear nerve

c. Hypoglossal nerve d. Trigeminal nerve

53. Water-hammer pulse is pathognomonic of

a. Interventrucular septal defect b. Patent ductus arteriosus

c. Dilated cardiomyopathy d. Aortic incompetence

54. Which of the following is termed as diastolic sound

a. First heart sound b. Second heart sound

c. Third heart sound d. Fourth heart sound

55. 'P' wave in ECG denotes

a. Atrial repolarization b. Ventricular depolarization

c. Atrial depolarization d. Ventricular repolarization

56. Prognosis of a disease means knowing

a. the cause of disease b. pattern of disease

c. outcome of disease d. prevention of disease

57. Haemotochezia means presence of blood in

a. urine b. sputum c. vomitus d. stools

58. Lactation tetany in mares is due to

a. hypoglycemia b. hypomagnesaemia

c. hypocalcemia c. hypophosphataemia

59. Metabolic acidosis is suggestive of

a. High plasma bicarbonate b. Low carbonic acid

c. Low plasma bicarbonate d. High plasma phosphate

60. Hypotonic dehydration means

a. Loss of fluid without sodium b. Loss fluid only

c. Loss of sodium without much fluid d. Loss of fluid with sodium

61. Iron deficiency anaemia is

a. Normocytic normochromic b. Normocytic hypochromic

c. Microcytic hypochromic c. Macrocytic hypochromic

62. Death in hydrocyanic acid poisoning is due to

a. Anoxic anoxia b. Anaemic anoxia c. Histotoxic anoxia d. Stagnant anoxia

63. The antidote for Nitrite poisoning is

a. Atropine sulphate b. Pralidoxime c. Methylene blue d.Calcium versanate

64. Adipocere means

a. Accumulation of fat b. Postmortem change

c. Tumor of adipose tissue d. Antemortem change

65. The signs of Milk fever are observed when blood calcium level falls below

a. 8 mg/dl b. 10 mg/dl c. 5.5 mg/dl d. 6.5 mg/dl

66. Which of the following has renal vaso-dialotory effect in acute renal failure?

a. Vasopressin b. Frussemide c. Spironolactones d. Dopamine

67. Curled toe paralysis in chicks is due to deficiency of

a. Riboflavin b. Thiamin c. Niacin d. cyanocobalamine

68. Which of the following is having good therapeutic value in frothy bloat?

a. Antizymotics b. Non-ionic surfactants c. Mineral oils d. All

69. Free gas bloat is also known as

a. Pasture bloat b. Primary tympany c. Frothy bloat d. Secondary Tympany

70. Which of the following is the important cause of Abomasal displacement

a. Ruminal impaction b. Atony of omaso-abomasal spincture

c. Atony of abomasum d. Omsal impaction

71. Mad cow disease is

a. Spongiform encephalopathy b. Encephalomalacia

c. Sporadic bovine encephalomyelitis d. All of the above

72. Which of the following is important test to detect sub-clinical mastitis

a. NAGase activity b. Somatic cell count

c. Electrical conductivity d. All of the above

73. Which of the following is having mucokinetic and bronchodilatory effect

a. Frussemide b. Theophylline

c. Clenbuterol d. Bromohexine

74. Which of the following is the marker of early stages of hepatic dysfunction in cattle

a. Gamma-glutamyltransferase b. Alkaline phosphatase

c. Asparate aminotransferase d. Sorbitol dehydrogenase

75. Moderate leucocytosis, neutrophilia with a left shift is suggestive of

a. Acute local peritonitis b. Chronic local peritonitis

c. Acute diffused peritonitis d. None of the above

76. Complete loss of ability to absorb immunoglobulins in colostrum occur by

a. 6 – 8 hours after birth b. 8-12 hours after birth

c. 12-20 hours after birth d. 24-36 hours after birth

77. The most important cause of allotriophagia in animals is

a. Calcium deficiency b. Protein deficiency

c. Phosphorus deficiency d. Vit.D deficiency

78. Puerperal tetany in bitches is caused by

a. Hypoglycemia b. Hypocalcemia

c. Hypomagnesemia d. Hypocalcemia and hypoglycemia

79. Important biochemical change in Baby Pig disease is

a. Hypothermia b. Hypoglycemia c. Hypocalcemia d. Anaemia

80. Enzootic ataxia in lambs is due to deficiency of

a. Copper b. Selenium & Vit. E c. Zinc d. Vit. A

81. Complicated Diabetes mellitus is confirmed by presence of

a. Glycosuria b. Ketonuria

c. Glycosuria with Ketonuria d. Proteinuria

82. Crazy chick disease is due to deficiency of

a. Vit. A b. Vit. K c. Vit. C d. Vit. E

83. Hypotonic dehydration is having

a. Hypokalemia b. Hyponatraemia c. Hypochloremia d. Hypernatremia

84. Which of the following is used as sustained release antifoaming drug for pasture bloat

a. Silica in dimethicon b. Turpentine

c. Monensin d. Aluminium hydroxide

85. Which of the following is an uncommon sequel of traumatic reticulo-peritonitis

a. Diaphragmatic hernia b. Diffused peritonitis

c. Rupture of left gastroepiploic artery d. Congestive heart failure

86. The case fatality rate in abomasal ulcers in dairy cattle is 100 percent in

a. Type 1 b. Type 2 c. Type 3 d. Type 2 & 4

87. Which of the following is an excellent intracranial decompressant?

a. Frussemide b. Spironolactone

c. Mannitol d. Mannitol with corticosteroid

88. Parakeratosis is caused by

a. Vit. A deficiency b. Vit. E deficiency

c. Zinc deficiency d. Manganese deficiency

89. Ovine ketosis is more common during

a. Late gestation b. one week post lambing

c. Four weeks post-lambing d. immediately after lambing

90. Presence of Formiminoglutamic acid in urine is confirmation of

a. Copper deficiency b. Selenium deficiency

c. Cobalt deficiency d. Calcium deficiency

ANSWER KEY

1	a	26	a	51	d	76	d
2	a	27	b	52	c	77	c
3	b	28	b	53	a	78	d
4	b	29	b	54	c	79	b
5	c	30	c	55	c	80	a
6	c	31	c	56	c	81	c
7	a	32	d	57	d	82	d
8	c	33	c	58	c	83	d
9	d	34	b	59	c	84	c
10	c	35	b	60	d	85	c
11	b	36	c	61	c	86	d
12	d	37	c	62	c	87	d
13	a	38	b	63	c	88	c
14	d	39	c	64	b	89	a
15	c	40	b	65	c	90	c
16	d	41	d	66	d		
17	b	42	b	67	a		
18	d	43	d	68	d		
19	d	44	d	69	d		
20	a	45	d	70	c		
21	b	46	d	71	a		
22	d	47	b	72	d		
23	a	48	b	73	c		
24	c	49	c	74	a		
25	c	50	d	75	a		

VETERINARY MEDICINE - II

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1. Oxytetracycline is contraindicated in

a. Young animals b. Pregnant animals c. Old animals d. a and b

2. Pseudo cow pox lesions are characterized by

a. Pus b. Horse shoe shaped ring scab c. Blood oozing d. None

3. Swine pox is

a. Malignant disease b. Benign disease c. Mixed disease d. None

4. The viral disease of horses restricted to North and South Americas only

a. EIA b. Equine influenza c. Equine encephalomyelitis d. AHS

5. The following pups are highly susceptible to canine distemper

a. Inadequate immunity b. Adequate immunity c. Vaccinated pups d. Sick pups

6. Death of rabid dog is due to

a. Cardiac failure b. Respiratory failure c. Nervous system failure d. All

7. The following species are resistant to FMD

a. Pigs b. Goats c. Sheep d. Horses

8. The drug of choice in the treatment of wooden tongue is

a. Alincomycin b. Gentamicin c. Potassium iodide d. Tetracycline

9. Vaginal mucus agglutination is useful to diagnose

a. Brcellosis b. Anthrax c. Erysepelosis d. Leptospirosis

10. The following species is resistant to botulism

a. Cattle b. Horse c. Sheep d. Pigs

11. Presence of suspicious foreign material in the forestomach in post mortem in cattle is suggestive of

a. Botulism b. Anthrax c. Black leg d. None

12. Trismus with restricted jaw movement, saw horse posture are characteristic symptoms of

a. Actinobacillosis b. Listeriosis c. Enteriotoxaemia d. Tetanus

13. The vaccine inoculated in poultry birds on the day of hatching is

a. Avian leucosis complex b. Ranikhet disease c. Marek's disease d. IBD

14. Development of pustular and scabby lesions on the muzzle and lips of sheep and goats are characteristic symptoms of

a. PPR b. RP c. Orf d. Bluetongue

15. Transmission of encephalitic form of listeriosis occurs by

a. Ingestion of contaminated milk b. Infection of tooth cavity

c. Infection through naval d. None of the above

16. Predilection site for Brucella abortus

a. Pregnant uterus b. Udder c. Testicles d. All of the above

17. Bovine viral diarrhea virus is antigenically related to

a. Hog cholera & Border disease b. PPR & Measles

c. CD & Measels d. None of the above

18. Death in puppies suffering for canine parvo virus infection are mainly due to

a. Severe dehydration b. Excessive blood loss c. Myocarditis d. None

19. Tiger heart condition is observed in

a. TB b. JD c. FMD d. None

20. The type of New castle disease virus is most virulent

a. Velogenic b. Mesogenic c. Lentogenic d. None

21. Shipping fever in cattle is caused by

a. Pasteurella haemolytica b. Pasteurella multocida

c. Mycoplasma mycoides d. Chlymydia psittaci

22. Necrotizing myositis is the main pathogenesis found in following disease

a. Brucellosis b. FMD c. BQ d. Tetanus

23. The allergic test conducted on horse for the diagnosis of glanders is called

a. Strauss reaction b. Mallein test c. Johnin test d. Coggin's test

24. Fowl typhoid in poultry is caused by

a. Pasteurella multocida b. Salmonella typhimurium

c. Salmonella gallinarium d. Salmonella pullorum

25. Gold standard serological test used for diagnosis of leptospirosis is

a. RPAT b. MAT c. AGPT d. HAT

26. The chewing gum type of seizures is classical nervous sign shown in dogs affected with

a. ICH b. Canine parvoviral gastroenteritis c. Rabies d. CD

27. Abortion is one of the predominant clinical sign in following equine disease

a. EIA b. Equine influenza c. Equine viral rhinopneumonitis d. AHS

28. The following disease cause immune suppression in affected chickens

a. Avian encephalomyelitis b. IBD c. ILT d. Avian influenza

29. The most commonly conducted serological test for detection of antibodies in chickens vaccinated against ND is

a. HAT b. HIT c. CFT d. Indirect FAT

30. PPR disease is more severe and cause high mortality in

a. Cattle b. Buffales c. Goats d. Sheep

31. Rabies inclusion bodies

a. Bollinger bodies b. LCL bodies c. Negribodies d.Koch blue bodies

32. Biological vector of bluetongue virus

a. Mosquitoes b. Ticks c. Fles d. Culicoides

33. Epitheliotropic virus is

a. Rabies b. FMD c. Pox d. Smedi virus

34. Single intradermal test is performed to diagnose

a. IBR b. BVD c. RP d. JD

35. Tarry coloured blood

a. Canine parvoviral infection b. Anthrax c. Clostridial infection d. RP

36. Hog cholera is disease of the following animal

a. Dog b. Bovine c. Swine d. Sheep & goat

37. Raised button ulcers in colonic mucosa of swine is the pathogenic lesion in

a. Theileriosis b. Hog cholera c. Swine fever d. All of the above

38. Abortion causing zoonotic diseases

a. Brucellosis b. Leptospirosis c. a & b d. None

39. Suitable age for primary vaccination against rabies is

a. 3 weeks b. 3 months c. 4 months d. 5 months

40. Pruritus is symptom of following disease

a. Scrapie b. Pseudorabies c. Mange d. All of the above

41. The proportion of diseased animals that die

a. Mortality b. Incidence c. Case fatality d. Morbidity

42. The study of disease in a small group of individuals with respect to factors that influence its occurrence in larger segment of population

a. Micro epidemiology b. Environmental epidemiology

c. Survey epidemiology d. Comparative epidemiology

43. The amount of organism required to initiate infection indicates

a. Virulence b. Pathogenesity c. Susceptibility d. Infectivity

44. The period between infection and maximum infectiousness is

a. Generation time b. Prepatent period c. Threshold level d. Eclipse

45. Dogs that are affected with rabies are examples of

a. Convalescent carriers b. Incubatory carriers c. Latent carriers d. None

46. The disease that occurs with a predictable regularity with minor fluctuations in its frequency, then such occurrence is called

a. Sporadic b. Endemic c. Pandemic d. Epidemic

47. The distribution of cases of a disease based on times of its occurrences is called

a. Demography b. Spatial distribution c. Temporal distribution d. Mapping

48. Transmission of an infection by doctor during surgical or medical practice is called

a. Vertical transmission b. Iatorogenic transmission

c. Transtadial transmission d. Aerial transmission

49. Study of animals and plants in relation to habit and habitats is called

a. Ecology b. Biome c. Epornitics d. Zoonosis

50. Measures to make regional extinction of an infectious agent is called

a. Control b. Eradication c. Tertiary prevention d. Niche filling

51. Following are the causes of failure of the treatment of helminth infection in animlas

a. Migrating larvae are inaccessible

b. Failure to adequately protect young animals

c. Use of insufficient dose or incorrect anthelmintic

d. All of the above

52. Clinically following symptoms will be observed in a sheep suffering from acute fascioliasis

a. Anaemia, weakness, pain on palpation of abdomen, loss of appetite

b. Weight loss, submandibular oedema, anaemia

c. Loss of weight, diarrhea, anaemia d. All of the above

53. Following snails act as an intermediate host in amphistomiasis in cattle

a. Lymnaeid snails b. Planorbid snails c. a and b d. None

54. Following worm of horse is responsible for colic symptoms

a. Habronema muscae b. Tichostrongylus axe c. Strongylus vulgaris d. All

55. Tape worm infestation can be treated with the following drug

a. Fenbendazole @ 5 mg/kg b.wt. b. Albendazole @ 5 mg/kg b.wt.

c. Praziquantal @ 5 mg/kg b.wt. d. All of the above

56. Visceral larva migrans is caused by the migration of larvae of

a. Toxocara canis b. Dictyocaulus viviparous c. Onchocera gibroni d. None

57. Toxoplasmosis is a contagious disease of

a. Cattle, pigs, sheep and goats b. Sheep and goats

c. Only cats d. All the species including human being

58. Anaplasma marginale is observed in

a. Erythrocytes b. Leucocytes c. Muscle cells d. None

59. Hypoalbuminia observed in fascioliosis is due to

a. Reduced albumin levels due to renal loss

b. Reduced albumin synthesis due to liver damage

c. Deficiency of proteins in diet d. None of the above

60. Following helminth can be prevented by prophylactic vaccination

a. Fasciola hepatica b. Paramphistomum c. Dictyocaulus viviparous d. None

61. Berenil is the drug of choice for

a. Babesiosis b. Anaplasmosis c. Theileriosis d. None

62. Pimply gut is caused by

a. Oesophagostomum b. Bunostomum c. Haemonchus d. None

63. The cystic intermediate stage of Echinococcus granulosus is found in

a. Sheep b. Goat c. Cattle d. All

64. The eggs of the Demodex canis are

a. Round b. Spindle shaped c. Oval shaped d.Variable in shape

65. Tape worms of dogs found in

a. Stomach b. Small intestine c. Large intestine d. None

66. Gid in goat is caused by

a. Coenurus cerebralis b. Cysticercus pisiformis c. Coenurus serialis d. None

67. Anthelmintic resistance is seen in

a. Haemonchus spp b. Ascaris spp c. Amphistomes d. Tape worm

68. Etiology of Verminous bronchitis is

a. Dictyocaulus spp b. Bunostomum spp c. Trichuris spp d. Stephanurus spp

69. Intermediate host for fasciola hepatica is

a. Planorbid snails b. Lymnaeid snails c. a and b d. None

70. Hydatid cyst is larval stage of

a. T.multiceps b. T.hydatidigena c. E.granulosus d. T.saginata

71. 'Clay-pipe stem' fibrosis of liver is a pathognomonic lesion in

a. Amphistomiasis b. Fascioliais c. Ascariasis d. Schistosomiasis

72. The drug of choice in moneiziasis is

a. Niclosamide b. Ivermectin c. Closantal d. All of the above

73. Prenatal infection is common in

a. Ancylostomiasis b. Strongylosis c. Ascariasis d. a and c

74. Haemonchosis is characterized by

a. Hypoprotenaemia b. Anaemia c. Oedema of lower jaw d. All

75. 'Milk spot' liver is a pathognomonic lesion in

a. Amphistomiasis b. Fascioliais c. Ascariasis d. Schistosomiasis

76. Severe pathogenesis in paramphistomiasis is caused by

a. Mature flukes b. Immature (migratory) flukes c. Ova d. All

77. Morocco leather appearance of gastric mucosa is observed in

a. Stephanofilariosis b. Ostertagiasis c. Cooperiasis d. Trichostrongylosis

78. Gastric granuloma in horses is caused due to

a. Habronema majus b. Drachia megastoma c. Habronema muscae d. All

79. Ivermectin is highly effective in treatment of

a. Ascariasis in pigs b. Stephanofilarisis in buffaloes

c. External & internal parasites d. All of the above

80. Pipe stem faeces is caused by

a. Babesia bigemina b. Babesia cabelli c. Babesia divergens d. Babesia bovis

81. Cystic intermediate stage of Echinococcus granulosus is found in

a. Sheep b. Goat c. Cattle d. All of the above

82. The immature stage of following liver flukes is continuously migrates in the liver parenchyma so severely without causing encapsulation in such a way that only one or two flukes can kill a sheep

a. Fasciola gigantica b. Fasciola hepatica

c. Dicrocoelium dendriticum d. Fascioloides magna

83. Sedimentation and decanting technique is used to diagnosis of acute amphistomiasis based on the identification of following stage of the parasite's life cycle in the faeces

a. Eggs b. Matured flukes c. Immature flukes d. Miracedium

84. 'Thumps' is a characteristic clinical sign noticed in ascariasis infestation of

a. Piglets b. Foals c. Calves d. Pups

85. The following condition is sequalae of canine spirocercosis

a. Pulmonary emphysema b. Pulmonary oestoarthropathy

c. Pneumonia d. Oestoporosis

86. Adult haemonchus contortus worms inhabit

a. Rumen b. Small intestine c. Abomasum d. Large intestine

87. Lung worm infestation in horse is caused by

a. Dictyocaulus arnfieldi b. Dictyocaulus filaria

c. Prostrongylus rufescens d. Dictyocaulus eckerti

88. Thin sow syndrome is seen in pigs affected with

a. Ascaris suum b. Toxoplasma gondii

c. Metastrongylus apri d. Oesophagostomum dentatum

89. Ear sore in Indian buffalo

a. Stephanofilaria stelesi b. Stephanofilaria zaheri

c. Stephanofilaria assamnensis d. Stephanofilaria boomkeri

90. Intermediate host for Dipylidium caninum is

a. Coprophagus beetle b. Musca Spp.

c. Ctenocephalides canis d. Culex Spp.

91. The species of Theileria recorded in goats is

a. T. annulata b. T. parva c. T. hirci d. T. mutans

92. In Toxoplasmosis, abortion and still births is common in

a. Sheep b. Cattle c. Horse d. Buffalo

93. Follicular mange in dog is caused by

a. Sarcoptes spp b. Psorptes spp c. Demodex spp d. Notoedres spp

94. Black head disease of poultry is caused by

a. Heterakis gallinarum b. Histomonas meleagridis

c. Emeria acervulina d. Lipeurus caponis

95. Lymph node biopsy stained smear is examined for the diagnosis of

a. Anaplasmosis b. Toxoplasmosis c. Theileriosis d. Babesiosis

96. Dourine is characterized by

a. Lymph node enlargement b. Conjunctivitis

c. Haemoglobinuria d. Dollar spots

97. Babesiosis is more common in

a. Exotic cattle b. Indigenous cattle c. Buffaloes d. None

98. Method of transmission of lung worm infestation

a. Ingestion of ova b. Ingestion of 3rd stage larva

c. Ingestion of embryo d. All of the above

99. Important clinical signs in equine strongylosis

a. Arteritis b. Aanemia c. Colic d. All of the above

100. The following are blood sucking nematodes

a. Strongylus vulgaris b. Haemonchus contortus c. Ascaris suum d. a and b

101. Clinical findings in coenurosis

a. Blindness b. Muscular tremors c. Staggering gait d. All

102. Intermandibular oedema is common finding in

a. Paramphistomosis b. Fasciolosis c. Haemonchosis d. All of the above

103. The stage of strongylus vulgaris is highly pathogenic is

a. Adult b. Larvae c. Embronated ova d. None

104. The shape of schistosoma nasale ovum is

a. Planquim b. Nepoleon hat c. Oval d. Elliptical

105. Raksha vac-T is vaccine for

a. Babesia b. Theileria c. Toxoplasma d. Trypanosoma

106. Quinapyramine salts are used for the treatment of

a. Strongylosis b. Theileriasis c. Trypanosomiasis d. Anaplasmosis

107. Prenatal infection in pups can occur due to

a. Hookworm b. Tapeworm c. Toxocara d. Coccidia

108. Obstructive jaundice may be seen in infestation of

a. Liver flukes b. Hook worms c. Schistosomes d. Strongyles

109. Koch blue bodies in theileria infection can be demonstrated by

a. Liver biopsy b. Lymphnode biopsy

c. Wet mount smear d. Blood smear examination

110. Thrombocytopaenia is the persistent character of

a. Babesiosis b. Ehrlichiosis c. Leptospirosis d. Theileriosis

ANSWER KEY

1	d	21	a	41	c	61	a	81	d	101	d
2	b	22	c	42	a	62	a	82	d	102	d
3	b	23	b	43	d	63	d	83	c	103	b
4	c	24	c	44	a	64	b	84	a	104	b
5	a	25	b	45	b	65	b	85	b	105	b
6	b	26	d	46	b	66	a	86	c	106	c
7	d	27	c	47	c	67	a	87	a	107	c
8	c	28	b	48	b	68	a	88	d	108	a
9	a	29	b	49	a	69	b	89	b	109	b
10	d	30	c	50	b	70	c	90	c	110	b
11	a	31	c	51	c	71	b	91	c		
12	d	32	d	52	a	72	a	92	a		
13	c	33	b	53	b	73	d	93	c		
14	c	34	d	54	c	74	d	94	b		
15	b	35	b	55	c	75	c	95	c		
16	d	36	c	56	a	76	b	96	d		
17	a	37	b	57	d	77	b	97	a		
18	c	38	c	58	a	78	b	98	b		
19	c	39	b	59	b	79	d	99	d		
20	a	40	d	60	c	80	c	100	d		

VETERINARY GYNAECOLOGY & OBSTRETICS

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1. The precursor of Progesterone hormone is
   a. Cholesterol b. Arachidonic acid c. Tyrosine d. Tryptophan
2. The Precursor of Prostaglandin $F_2\alpha$ is
   a. Cholesterol b. Tyrosine c. Arachidonic acid d. Steroid
3. The precursor of Oestrogen hormone is
   a. Cholesterol b. Arachdonic acid c. Tyrosine d. Proteins
4. The precursor of Melatonin is ()
   a. Cholesterol b. Arachidonic acid c. Tryptophan d. Vitamin A
5. Synthesis and secretion of Melatonin is greater
   a. During darkness b. During bright sunlight
   c. During slow sunlight d. During high temperature
6. Ovulation occurs in cow during
   a. Proesterus b. Estrus c. Metestrus d. Diestrus
7. Ovulation occurs in She-buffalo during
   a. Proestrus b. Estrus c. Metestrus d. Diestrus
8. Ovulation occurs in bitch during
   a. Proestrus b. Estrus c. Metestrus d. Diestrus
9. Ovulation occurs in cow
   a. 12-16 hours after estrus b. 20-22 hours after estrus
   C. 12-16 hours before estrus d. 20-22 hours before estrus
10. Ovulation occurs in She-buffalo
    a. 18-24 hours after estrus b. 18-24 hours before estrus
    c. 30-40 hours after estrus d. 30-40 hours before estrus
11. In which period of estrous cycle the vaginal bleeding is seen in bitch
    a. Proestrus b. Estrus c. Diestrus d. Metestrus
12. In which period of estrous cycle the vaginal bleeding is seen in cow
    a. Proestrus b. Metesturs c. Estrus d. Diestrus
13. The attraction of males by female bitch during estrus due to
    a. Pheromone & Methylhydroxybenzoate b. FSH & LH release
    c. Estrogen & Progesterone release d. $PGF_2\alpha$ & PGI_2 release
14. Ovulation in bitches occurs about

a. 40-50 hours after LH surge b. 20-30 hours after LH surge

b. 20-30 hours before LH surge d. 80-100 hours after LH surge

15. Cornificaton of Vaginal Epithelium is increased due to

a. Rise in the Oestrogen hormone b. Rise in Progesterone hormone

c. Rise in FSH d. Rise in Prolactin hormone

16. Dominant cell types during estrus period in bitch

a. Neutrophils cells b. Erythrocytes cells c. Basal Cells d. Keretinised Cells

17. Ideal breeding time in bitch

a. Twice between 0 and 4 day of estrus

b. Twice between 0 and 4 day of early Proestrus

c. Twice between 0 and 4 day of Diestrus

d. Twice between 0 and 4 day of Late proestrus

18. The nucleus of superficial cells in bitch during estrus is

a. Small pyknotic b. Large nucleus c. Absent Nucleus d. Two nucleus

19. The gestation length in bitch is

a. 56-68 days b. 40-52 days c. 60-72 days d. 50-62 days

20. Graafian follicle is discovered by

a. Fallopius b. Regnier deGraaf

c. Fallopius and Coiter d. Van Leeuwen hock

21. Corpus Luteum is discovered by

a. Van Leeuwen hock b. Coiter c. Regnier deGraaf d. Spallanzani

22. Sometimes the antral follicle is referred as a

a. Tertiary follicle b. Secondary follicle c. Primary follicle d. Primordial

23. Type of Uterus in Rabbit is

a. Duplex b. Bicornuate c. Bipartite d. Simplex

24. The inner surface of Cow cervix is having

a. Circular mucosal folds b. Longitudinal mucosal folds

c. Vertical mucosal folds d. Horizontal Mucosal folds

25. The inner surface of Mare cervix is having

a. Circular mucosal folds b. Longitudinal mucosal folds

c. Vertical mucosal folds d. Horizontal Mucosal folds

26. Only fertilized egg passes into uterus in case of

a. Cow b. She Buffalo c. Mare d. Ewe

27. The period of embryo in cow is

a. 0-12 days of gestation b. 12-45 days of gestation

c. 12-55 days of gestation d. 11-35 days of gestation

28. Which period of gestation fremitus can be palpated

a. 12-35 days of gestation b. 35-55 days of gestation

c. 80-120 days of gestation d. 35-70 days of gestation

29. Regeneration of the endometrium is slower in

a. Discoidal placenta b. Zonary placenta

c. Diffuse placenta d. Cotyledonary placenta

30. The drug of choice in treatment of mummified fetus is

a. Stilbesterol b. Oxytocin c. Epidosin d. Lutalyse

31. After ovulation the granulosa cells differentiate into

a. Small luteal cells of CL b. Large luteal cells of CL

c. Dead luteal cells of CL d. Black luteal cells of CL

32. Endometrial oxytocin receptors are more in number during

a. Luteal phase of the cycle b. Follicular phase of the cycle

c. Early follicular phase of the cycle d. Antral follicular phase of the cycle

33. Which type of Corpus luteal cells persists throughout the pregnancy in She buffalo

a. Large Luteal cell b. Small Luteal cell c. No cells persist d. Granulosa cells

34. Size of the large luteal cell is

a. 25-35 µm b. 15-20 µm c. 10-15 µm d. 50-70 µm

35. Hypothalamic surge center present in

a. Pre-pubertal male animal b. Post-pubertal male animal

c. Post-pubertal female animal d. Post-pubertal female and male animal

36. Hypothalamic surge center absent in

a. Male animal b. Female animal

c. Pre-pubertal female animal d. Post-pubertal female animal

37. Pseudopregnancy incidence is more in

a. Cow b. Doe c. Ewe d. Bitch

38. Expulsion of dead fetus after full gestation is

a. Abortion b. Still birth c. Premature birth d. Over mature birth

39. Free martins females having

a. Small clitoris b. Large clitoris c. No clitoris d. Large urethra

40. Maternal recognition of pregnancy in mare at

a. 15-18 days b. 10-12 days c. 12-14 days d. 18-20 days

41. Maternal recognition of pregnancy in Sow at

a. 15-18 days b. 11-12 days c. 7-9 days d. 18-19 days

42. Pregnancy recognition factor in case of cow is

a. Estradiol b. Estrogens c. b IFN t d. O IFN t

43. Pregnancy recognition factor in sow is

a. b IFN t b. O IFN t c. Proteins d. Estradiol

44. In which species PGF2α is rerouted into the uterine lumen at maternal recognition of pregnancy

a. Sow b. Mare c. She-Buffalo d. Donkey

45. Drug of choice for treatment of luteal cyst in cow is

a. Estrogen Preparation b. Progesterone Preparation

c. LH Preparation d. $PGF_2\alpha$ Preparation

46. Highest Percentage embryo mortality occurs in between

a. 1-7 days of pregnancy b. 10-30 days of pregnancy

c. 35-40 days of pregnancy d. 40-275 days of pregnancy

47. Average incidence of infertility in organized cattle farm is

a. 5-10 percent b. 1-2 percent c. 10-15 percent d. 15-20 percent

48. Lactational anoestrus is due to

a. Increased level of Prolactin b. Increased level of Oestrogen

c. Increased level of GnRH d. Increased level of FSH

49. Post partum Anoestrous incidences is more in

a. Cow b. She-buffalo c. Mare d. Ewe

50. Cuboni test is highly accurate in mare when applied in between

a. 40-120 days of gestation b. 17-21 days of gestation

c. 120-270 days of gestation d. 150-300 days of gestation

51. Radiographic confirmation of pregnancy in bitch is possible as early as

a. 20-25 days of gestation b. 55-60 days of gestation

c. 42-45 days of gestation d. 35-38 days of gestation

52. First mating in a young She-camel is usually done at

a. One year age b. Two year age c. Three year age d. Four year age

53. Percentage of ovulation from right ovary in cattle is

a. 40 Percent b. 80 Percent c. 70 Percent d. 60 Percent

54. Follicular fluid is rich in

a. Progesterone b. Estrogen c. Relaxin d. Inhibin

55. Haematic form of mummification seen in

a. Cattle b. Horse c. Dog d. Cat

56. Embryo germ layer develops from cells of

a. Trophoblast b. Trophectoderm c. Blastocoele d. Embryoblast

57. Chorion develops from cells of

a. Trophoblast b. Inner cells c. Embryoblast d. Blasocoele

58. The elongation phase of the Blastocyst in sheep at

a. 11 days post estrus b. 8 days post estrus

c. 13 days post estrus d. 15 days post estrus

59. The elongation phase of blasocyst in cow at

a. 11 days post estrus b. 8 days post estrus

c. 13 days post estrus d. 15 days post estrus

60. Hatching of Blasocyst from zona pellucida in cow

a. Between 7-8 days b. Between 4-5 days

c. Between 10-12 days d. Between 9-10 days

61. Enzyme responsible for softening of zona matrix

a. Trypsin and plasmin b. Acid and alkali phosphatase

c. Hyaluranidase d. Acrosin

62. Elongation of conceptus will not take place in

a. Sheep b. Goat c. Pig d. Horse

63. Which are the specialized cells seen at the formation of endometrial cups in the mare

a. Chorionic girdle cells b. Amnionic girdle cells

c. Endometrial epithelial cells d. Multinucleate cells

64. Which types of cells factors protects the immunologic rejection of conceptus in ruminants

a. Endometrial cup cells b. Syncytium or Multinucleate cells

c. Chorionic girdle cells d. Endometrial cells

65. Follicles less than 4 mm diameter in cow is

a. Independent of gonadotrophin support b. Dependent of gonadotrophin support

c. Dependent of Oestrogen support d. Dependent of Progesterone support

66. How many follicular waves are commonly seen in *Bos indicus*

a. Single wave b. Two waves c. Three waves d. Four waves

67. How many follicular waves are commonly seen in *Bos taurus*

a. Single wave b. Two waves c. Three waves d. Four waves

68. Ovulatory follicular waves is always

a. Shorter duration b. Longer duration

c. Equal duration d. Too longer duration

69. Approximately Germ cells in prenatal fetal ovaries in cattle is

a. 100000 nos. b. 150000 nos. c. 200000 nos. d. 275000 nos.

70. Which hormone is responsible for apoptosis of ovarian follicular cells

a. Oestrogen b. FSH c. LH d. Prolactin

71. Approximately how many follicles are mature and ovulate during life time of a cow

a. 75-100 nos. b. 500- 600 nos. c. 600-700 nos. d. 700-1000 nos.

72. Drug of choice for treatment of Follicular cyst in cow is

a. Estrogen Preparation b. Progesterone Preparation

c. LH Preparation d. $PGF_2\alpha$ Preparation

73. Time required for expulsion of fetal membranes in mare

a. ½ to 2 hours b. 4-6 hours c. 6-8 hours d. 8-10 hours

74. Ovaries are derived from

a. Germinal ridges b. Mullerian ducts c. Urogenital sinus d. Vestibular folds

75. Uterus and oviducts are derived from

a. Germinal ridges b. Mullerian ducts c. Urogenital sinus d. Vestibular folds

76. Non Projection of corpus luteum above the surface of ovary in

a. Mare b. Cow c. Buffalo d. Ewe

Most common form of dystocia in mare is

a. Wry neck b. Monsters c. Twins d. Schistosoma reflexus

77. Dilatation of cervix is easier in case of

a. Mare b. Cow c. Buffalo d. Ewe

78. Half life of Folligon is

a. ½ hour b. 1-3 hours c. 6-8 hours d.. More than 55 hours

79. Dog sitting position is the complication of

a. Anterior presentation b. Posterior presentation

c. Oblique presentation d. Transverse presentation

80. The percentage of fetal calf serum used in flushing media

a. 1-2 Percent b.3-4 Percent c. 4-5 Percent d. 2-3 Percent

81. The percentage of fetal calf serum used in holding media

a. 1-2 Percent b.10-20 Percent c. 4-5 Percent d. 2-3 Percent

82. Injection of Prostaglandin in synchronized recipient to that of donor is

a. 1 day later than donor b. 1day earlier than donor

c. Same day d. Three days early

83. Superovulatory hormones are injected during

a. Early follicular phase b. Late Follicular phase

c. Mid luteal phase d. Late luteal phase

84. Fetal heartbeat can be detected by

a. A mode ultrasound b. B mode ultrasound

c. B mode ultrasound and Doppler analyzer d. Doppler analyzer

85. Rosette Inhibition test for pregnancy diagnosis is used as early as

a. 6-24 hours after fertile mating b. 24- 36 hours after fertile mating

c. 2-4 days after fertile mating d. 4-8 days after fertile mating

86. Dose of Prostaglandin used for early pregnancy diagnosis in cow

a. Luteolytic dose b. Double luteolytic dose

c. Single non luteolytic dose d. Triple Luteolytic dose

87. Calves produced from the cloning process is having

a. Smaller than normal calves b. 20 % heavier than normal calves

c. 20 % lighter than normal calves d. Both are equal

88. Average recovery of transferable embryos in cattle in each flush is

a. 1-2 embryo b. 0.5 -1 embryo c. 10 – 12 embryo d. 3- 7 embryo

89. Average recovery of transferable embryos in Buffalo in each flush is

a. 1-2 embryo b. 0.5 -1 embryo c. 10 – 12 embryo d. 3- 7 embryo

90. Repeat breeding due to delayed ovulation in cows can be treated with

a. Folligon b. Lutalyse c. Chorulon d. Furea bolus

91. In a free martin, the chromosomal sex complex is

a. XXY b. XX c. XY d. XYY

92. Early embryonic deaths may be due to the deficiency of

a. Progesterone b. Estrogen c. FSH d. $PGF_2\alpha$

93. The test conducted to diagnose tubal patency is

a. Cubonic test b.A-Z test c. Mucin test d. Rubin in sufflation test

94. Teratological defects will occur during

a. Period of Ovum b. Period of Embryo c. Period of Fetus d.Period of Zygote

95. The following operation helps in reducing the size of the fetus

a. Episotomy b. Traction c. Fetotomy d. Caesarian

96. Ventral deviation of the head is seen in

a. Breech presentation b. Transverse presentation

c. Vertex presentation d. dog sitting posture

97. The inner cell mass of blastocyst give rise to three germ layers of the embryo (Ectoderm, Mesoderm and endoderm) during the process called as

a. Gastrulation b. Compaction c. Polarization d. Syngamy

98. Hatching period of Blastocyst occurs in case of cow

a. 0-4 days b. 4-8 days c. 8-12 days d. 12-16 days

99. Migration of embryonic vesicle back and forth between uterine horn is essential in mare to inhibit

a. Polyspermy b. Luteolysis

c. Capacitation of other sperms d. Folliculogenesis

100. Which glycoprotein is abundant during the non receptive phase of pregnancy and serves as an antiadhesion factor is

a. Muc- I b. Relaxin c. $PGF_2\alpha$ d. Oestrogen

101. Which type of cells arising from the trophoblast at the time of placental attachment

a. Uninucleated cells b. Binucleated cells

c. Multinucleated cells d. Nucleus less cells

102. Binucleate cells first appears in cow at

a. Day 10 of gestation b. Day 12 of gestation

c. Day 17 of gestation d. Day 21 of gestation

104. Placental attachment occurs in mare on

a. Day 10-15 of gestation b. Day 16-21 of gestation

c. Day 24-41 of gestation d. Day 51-90 of gestation

105. Ferguson's reflex initiates release of which hormone at parturition in cow

a. Estrogen b. Oxytocin c. Prostaglandin d. Relaxin

106. Post coital pyometra is often associated with

a. Brucellosis b. Vibriosis c. Trichomoniasis d. Tuberculosis

107. Growth of the mammary gland duct system is under the influence of

a. Estrogen b. Progesterone c. Prolactin d. Relaxin

108. Growth of the mammary gland alveoli is under the influence of

a. Prolactin b. Estrogen c. Progesterone d. Prostaglandin

109. Exogenous Oxytocin has luteolytic action in

a. Bitch b. Cow & Ewe c. Mare & Sow d. Cow & ewe

110. Which is the important hormone in contraction of shell glands & vagina to induce oviposition in birds and reptiles?

a. oxytocin only b. FSH & LH

c. Prolactin & Vasopressin d. Vasotocin

111. Predominant Ig in follicular fluid is

a. IgA b. IgM c. IgG d. IgE

112. Predominant Ig in cervical fluid is

a. IgA b. IgM c. IgG d. IgE

113. In which species unfertilized ovum remains in oviduct for longer days

a. Sow b. Mare c. Ewe & Doe d. Bitch

114. Most of the developmental anomalies occur during

a. Period of embryo b. Period of ovum c. period of fetus d. During Birth

115. Endometrial cups are formed from

a. Chorionic girdle (fetal origin) b. maternal caruncles

c. Endometrium (maternal origin) d. None of the above

116. Centric type of nidation/implantation occurs in

a. Rodents b. Primates c. Ruminants d. None

117. Chemical structure of GnRH was determined by

a. Green & Harris b. Cole & Heart c. Gorski d.Shalley & Guellemin

118. Hippomanes are usually found in

a. Yolk sac b. Amniotic fluid c. Allantoic fluid d. All

119. The normal pH of Dog semen is

a. 5.8-5.9 b. 7.2-7.9 c. 7.1-7.5 d. 6.6-6.8

120. The normal volume of semen in dog is

a. 1-2 ml b. 0.5-1.5 ml c. 5-10 ml d. 3-4 ml

121. Average sperm concentration in Dog semen is

a. 800-1400 million/ml b. 600-1200 million/ml

c. 200-400 million/ml d. 2000-4000 million/ml

122. Average concentration in Ram semen is

a. 2000-4000 million/ml b. 200-400 million/ml

c. 2500-4500 million/ml d. 100-150 million/ml

123. Average sperm concentration in Buck semen is

a. 800-1400 million/ml b. 2500-4500 million/ml

c. 2000-4000 million/ml d. 600-1200 million/ml

124. Total sperm length in buffalo bull is

a. 61.95 µ b. 58.84 µ c. 69.59 µ d. 55.50 µ

125. Reaction time has co-relation with

a. Sex drive b. Motility of sperm c. Fertility of sperm d. Conc.of sperm

126. Increase in the incidence of loose head is the morphological sign of

a. Testicular hypoplasia b. Testicular Degeneration

c. Monorchidism d. Cryptorchidism

127. The end product of Fructolysis is

a. Carbon dioxide b. Water & Carbon dioxide

c. Citric acid d. Lactic acid

128. Aspermia denotes

a. Non volume b. Zero sperm

c. Decreased sperm d. Increased sperm

129. Necrozoospermia denotes

a. All dead sperm b. Increased Abnormal sperm

c. Decreased abnormal sperm d. Increased normal sperm

130. Average velocity of buffalo sperm cell is

a. 1.65 mm/minute b. 4.23 mm/minute

b. 0.50 mm/minute d. 3.50 mm/minute

131. Highest concentration of Inositol is seen in semen of

a. Boar b. Bull c. Ram d. Stallion

132. Protein defeminize the hypothalamic surge center in prenatal male

a. Alpha-fetoprotein b. Desendin protein c. Relaxin d. Prolactin

133. Some time gestation period of male calves is

a. 1-3 days longer b. 5-10 days longer

c. 10-12 days longer d. 8-10 days longer

134. The testicular descend occurs by mid fetal life in

a. Dog b. Pig c. Cattle d. Horse

135. When testicular descent occurs in stallion

a. mid gestation b. Late Quarter of gestation

c. Just before and after birth d. Early part of gestation

136. Testicular descent occurs at last quarter of fetal life in

a. Boar b. Ram c. Buck d. Stallion

137. Which factor controls the growth of gubernaculum during embryogenesis

a. Descendin b. Ascendin c. Gonadotropins d. Leyding cells

138. Blood entering into testis is having

a. Increased pulse b. Decreased pulse c. Pulseless d. Very high pulse

139. Which type of cells help movement of spermatozoa into the rete tubules

a. Peritubular cells b. Germ cells c. Sertoli cells d. Leyding cells

140. Spermatogenesis takes place predominantly in which port of seminiferous tubules

a. Straight portion b. Convulated portion

c. Rete tubules d. Peritubular

141. Transferrin protein is secreted by

a. Germ cells of testis b. Sertoli cells of testis

b. Leyding cells of testis d. Interstitial cells of testis

142. Which are the barrier prevent immunological destruction of spermatozoa

a. Peritesticular cells b. Sertoli cells tight junction

c. Peritesticular & Sertoli cell junction d. only Sertoli cell junction

143. Coxitis is seen most commonly in

a. Dogs b. Bull c. Stallion d. Buck

144. In ram, Balanoposthitis is also known as

a. Pizzle rot b. Phallocampus c. Rain bow d. Crampiness

145. Fibropapilloma generally seen in

a. Bull b. Stallion c. Buck d. Dog

146. Shape of sperm head in cock is

a. Elongated Cylindrical b. Elongated with hook

c. Elongated with spicule d. Oval with rounded

147. In testicular degeneration semen picture is

a. Teratozoospermia b. Azoospermia

c. Oligozoospermia d. Normozoospermia

148. Polyspermia can be prevented in cattle by

a. Cortical reaction b. First polar body

c. Previtelline space d. d. Cumulus cells

149. The ideal concentration of glycerol in diluents for the preservation of buffalo bull semen

a. 2 % b. 6% c. 12 % d. 18 %

150. Androgen binding protein is secreted by

a. Sertoli cells b. Leydig cells c. Myoid cells d. Rete testis

151. Seminal plasma is slightly alkaline in

a. Bull and Ram b. Bull and Boar c. Ram and stallion d. Boar & Stallion

152. Seminal plasma is slightly acidic in

a. Boar and Stallion b. Bull and Ram c. Bull and Boar d. Ram &Stallion

153. The highest concentration of inositol is found in the semen of

a. Bull b. Boar c. Ram d. Dog

154. Release of spermatozoa from subtesticular cells is called as

a. Spermiation b. Spermatogenesis

c. Spermatocytogenesis d. Spermatogenic wave

155. One primary spermatocyte produces

a. 4 spermatids b. 64 spermatids c. 1 spermatid d. 16 spermatids

156. B-Spermatogonia is formed after which stage

a. A_4 b. Intermediate spermatogonia

c. Primary spermatocyte d. secondary spermatocyte

157. One spermatogonia produces how many sperms

a. 4 b. 1 c. 64 d. 16

158. One spermatogonia produces how many spermatids

a. 4 b. 1 c. 64 d. 1

159. Transformation of secondary spermatocytes to spermatids is called

a. Spermatocytogenesis b. Spermateliosis

c. Spermiogenesis d. Spermeation

160. Which segment of sperm head plasma membrane attached to zona pellucida initially

a. Apical b. Post-acrosomal c. Principal d. Equitorial

Suggestive Reference books for further reading:

1. Reproduction in farm animals, E.S.E Hafez, B. Hafez, 7th edition.
2. Pathways to pregnancy and parturition,P. L.Senger, 1st edition
3. Controlled reproduction in cattle and buffaloes, Ian Gordon
4. Veterinary reproduction and obstetrics, edited by David E Noakes, 9th edition
5. Veterinary obstetrics, Franz Benesch & John G wright, 1st edition
6. Veterinary obstetrics & genital diseases, S G Roberts, 2nd edition
7. Fertility & infertility in domestic animals, J A Laing, 3rd edition
8. Current therapy in large animal Theriogenology, Robert s Younguist & Walter R Threlfall, 2nd edition
9. Textbook of veterinary Andrology, R P Verma, 1997
10. Physiology of reproduction and Ai in cattle, Salisbury C W, Van Damark N L and Lodge, JR
11. AI & Reproduction of cattle and buffaloes, Tomar N S

ANSWER KEY

Sr. No.	Correct answer	Sr. No.	Correct answer	Sr. No.	Correct answer	Sr. No.	Correct answer
1	(a)	41	B	81	A	121	C
2	(b)	42	C	82	B	122	A
3	(a)	43	D	83	B	123	B
4	c	44	A	84	C	124	A
5	(a)	45	D	85	C	125	A
6	C	46	B	86	A	126	B
7	c)	47	A	87	C	127	D
8	b	48	A	88	B	128	A
9	A	49	B	89	D	129	A
10	A	50	D	90	A	130	A
11	A	51	D	91	C	131	A
12	B	52	C	92	B	132	A
13	A	53	D	93	A	133	A
14	A	54	B	94	D	134	C
15	A	55	A	95	B	135	C
16	D	56	D	96	C	136	A
17	A	57	A	97	C	137	A
18	A	58	A	98	A	138	C
19	A	59	C	99	B	139	A
20	A	60	A	100	B	140	B
21	B	61	A	101	A	141	B
22	A	62	D	102	A	142	C
23	A	63	A	103	C	143	A
24	A	64	B	104	D	144	A
25	B	65	A	105	B	145	B
26	C	66	C	106	C	146	B
27	B	67	*B*	107	A	147	C
28	C	68	A	108	C	148	A
29	D	69	D	109	D	149	A
30	D	70	B	110	D	150	A
31	B	71	A	111	C	151	A
32	A	72	C	112	A	152	A
33	B	73	A	113	B	153	A
34	A	74	A	114	A	154	B
35	C	75	B	115	A	155	A
36	A	76	A	116	C	156	B
37	D	77	A	117	D	157	B
38	B	78	A	118	C	158	B
39	B	79	D	119	A	159	A
40	C	80	A	120	D	160	A

VETERINARY SURGERY & RADIOLOGY

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1. Lower eyelid is desensitized by

A).Infraorbital nerve block B). Supraorbital nerve block

C) Auriculopalpebral nerve block D) Retrobulbar nerve block

2. Which of the following anaesthetic is having comparatively short induction time and duration of action

A) Ketamine B) Pentobarbitone C) Propofol D) chloral hydrate

3. Ventro medial rotation of eye ball is seen in following stage of general anesthesia

A) Stage of voluntary excitement B) Stage of Involuntary excitement

C) First plain of third stage D Third plain of third stage

4. Dose of ketamine recommended for anesthesia in dogs is

A) 8 to 15 mg/kg B.W B) 0.5mg/kgB.W.

C) 0.05 to 0.11 mg/kg B.W. D) 1 mg/kg B.W.

5. Which of the following feature is seen with thiopentone anaesthesia

A) Diffusion hypoxia B) Glucose effect

C) Muscle relaxation D) Analgesic effect

6. Hypotension, respiratory depression are commonly seen with following anaesthesia

A) Ether B) Ketamine C)Xylazine D) Nitrous Oxide

7. Which of the following species is more sensitive to xylazine

A) Pig B) Horse C) Dog D)Buffalo

8. Which of the following anaesthetic is associated with diffusion hypoxia

A) Halothane B) Ether C) Isoflurane D) Nitrous oxide

9 Which of the following is the most common feature of diaphragmatic hernia in buffalo

A) Impaction of rumen B) Chronic recurrent Tympany

C) Leukocytosis and shift to left D) Brisket oedema

10. Common site of obstruction due to calculi in dog is

A) Urinary bladder B) Sigmoid flexure

C) Glans penis D) Caudal to ospenis

11. Preferred incision for castration in dog is

A) Midline postscrotal B) Midline prescrotal

C) Scrotal ablation D) Ischial incision

12. Preferred surgical approach for ovariohysterectomy in dog is

A) Cranial ventral midline approach B) Caudal ventral midline approach

C) Caudal paramedian D) Paracostal approach

13. Preferred approach for splenectomy in dog is

A) Caudal midline approach B) Left Flank approach

C) Caudal Paramedian approach D) Left paracostal approach

14. Suture size used for closure of skin in cow is

A) No.2 B) No.3-0 C) No.1-0 D) No.2-0

15. Preferred method of treatment for avulsion fracture is

A) Interfragmentary wiring B) hemicirclage wiring

C) tension band wiring D) Circlage wiring

16. Radiological sign of Non union of fracture is

A)External bridging callous

B) Fracture line not visible, medullary cavity reestablished

C) fracture line not visible and obliterated with callous

D) Rounding of fracture ends with large radiolucent line

17 Rotation of third phalanx is a radiological sign of

A) Quittor B) Side bone C) Chronic laminitis D) Navicular disease

18. Scattered radiation can be minimized by using following device during radiography

A) Aluminium filter B) Cassette C) Grid D) Rotatary anode

19. Fixing time followed during processing of radiograph is

A) 10 mts B) 30 mts C) 2 mts D) 10 sec

20. Following suture material is having best handling characteristics

A) Cotton B) Silk C) Nylon D) Stainless steel

21. Deminiralization of teeth is noticed in

A) Dental tartar B) Dental plaque

C) Dental caries D) Periodontal disease

22. Horn caner is common in

A) Bulls B) Buffaloes C) Cows D) Bullocks

23. Proptosis refers to

A) Displaced eyeball out of the orbital cavity B) Perforated cornea

C) Prolapse of iris D) Continuous lacrimation

24. Tarsorraphy refers to

A) Suturing of eye ball B) Suturing of eye lid

C) Suturing of tarsal gland D) Suturing of tendon

25) Hernia present on right lateral abdominal region in goat due to trauma can be referred as

A) Lateral hernia B) Ventral hernia C) Perineal hernia D) Umbilical hernia

ANSWER KEY

1	C
2	C
3	C
4	A
5	B
6	C
7	D
8	D
9	B
10	D
11	B
12	B
13	D
14	A
15	C
16	D
17	C
18	C
19	A
20	C
21	C
22	D
23	A
24	B
25	B

1. Which of the following anaesthetic causes diffusion hypoxia

A. Halothane B. Ether C. Nitrous Oxide D. Isofluorane

2. Which of the following is less rapidly acting intravenous anesthetic

A. chloral hydrate B. Ketamine C. Propofol D. Tiletamine

3. Following is a method of low flow anaesthesia in which the fresh gas flow equals uptake of anaesthetic gases by the patient.

A. Closed circle system B. Open system

C. semi closed system D. Semi open system

4.Following is longer acting antisialogague anticholinergic which does not penetrate placental barrier and can be recommended for caesarean in bitch.

A. Atropine B. Pilocarpine C. Glycopyrrolate D. Scopalamine

5. Fatty meal before thiophental anaesthesia causes

A. Increased requirement of thiophental B. Significant reduction in sleeping time

C. Increase in sleeping time D.Excitement and difficulty in induction

6.With thiophental anaesthesia, endotracheal tube is passed in

A. First Stage of anaesthesia B. Second Stage of anaesthesia

C. Third Stage of anaesthesia D. Fourth stage of anaesthesia

7. Romifidine causes

A. Sedation

B. B. Sedation, analgesia

C. Sedation, analgesia, muscle relaxation, hypotension, bradycardia

D. Sedation., analgesia, hypertension and tachycardia

8. Recommended non toxic topical anaesthesia for examination and minor surgery of eye in ruminants is

A. 0.5% proparacaine hcl B. 4% xylocaine hcl

C. Tetracaine hcl D. Mepivacaine hcl

9) Chloral hydrate is a

A. good analgesic B. good anaesthetic but weak analgesic

C. good hypnotic but poor anaesthetic D. good anaesthestic and analgesic

10) Which of the following local anaesthetic is less potent

A. Lignocaine B. Procaine C. Bupivacaine D. Mepavacaine

11) Which of the tranqulizer/sedative in horses causes paralysis of penis

A. Detomidine B. Diazepam C. Propriopramazine D. Droperidol

12) Following is the most significant symptom of intususception in bullock

A. Diarrhoea B. Blood and mucous in rectum

C. Metabolic alkalosis D. Dehydration, anorexia, sunken eye ball

13) Most common site for oesophagatomy in buffaloes is

A. Proximal cervical, left lateral B. Mid or distal cervical, left lateral

C. Proximal cervical, mid ventral D. Mid or distal cervical, mid ventral

14) Most common acid base imbalance noticed in bladder rupture of bullock is

A. Metabolic alkalosis, hypokalemia, hypocalcemia, hyponatraemia

B. Metabolic acidosis, hyperkalemia, hypocalcemia, hyponatraemia

C. Respiratory alkalosis, and increased bicarbonate

D. Respiratory acidosis, increased bicarbonate, hyperkalemia

15) Common site of calculi obstruction in horse is

A. Urinary bladder B. Pelvic urethra C. Glans penis D. Kidney

16) Following exposure factor is most useful in diagnosis of diaphragmatic hernia in buffalo

A. 50 mAS, 50 KVp B. 80 mAS, 70 KVp

C. 90 mAS, 90 KVp D. 30 mAS, 80 KVp

17) Preferred approach for surgical treatment of chronic obstructive balonoposthitis in bullock is

A. Midline postscrotal

B. Midline incision from prepuce to glans penis

C. Midline incision on glans penis

D. Paramedian

18)Following radiographic signs are seen in osteomedullography following 4 months after healed fracture repair using bone plating

A. Presence of contrast material in surrounding soft tissue around the fracture site

B. Uptake of contrast agent by lymphatics

C. Uptake of contrast agent by arteries of proximal and distal fragment

D. Uptake of contrast agent by veins from distal fragement and passing of contrast agent into Proximal fragment

19) Following nerve block is done for insertion of nose ring in bullock

A. Infraorbital B. Supraorbital

C. Linear infiltration D. Mental nerve block

20) Suture size used for closure of uterus in cow is

A. No.2 B. No.4 C. No.1-0 D. No.2-0

21) Atresia ani are not common in

A. Foals B. cow calves C. kids D. Buffalo calves

22) Champignon means

A. streptococcal infection of spermatic cord in ligated cords after open castration
B. Accumulation of peritoneal fluid in tunica vaginalis
C. Infection of t. vaginalis and granulomatous fibrous proliferation and draining tract
D. Proud cut horse

23) During fracture repair, following has a tendency to slip down if bone is not uniform

A. External skeletal fixation B. Hemicirclage wiring

C. Tension band wiring D. Circlage wiring

24) Earliest sign of infectious arthritis seen in radiograph is

A. Osteolytic distruction of subchondral bone
B. Synovial effusion and widening of joint space
C. Reduced radiolucent joint space
D. Osteophyte formation

25) Pectineal myotomy is indicated for

A. Dislocation of hip B. Hip dysplasia

C. Elbow dislocation D. Dislocation of pubis

ANSWER KEY

1	C	15	A
2	A	16	C
3	A	17	B
4	D	18	D
5	C	19	A
6	C	20	A
7	C	21	A
8	A	22	A
9	C	23	D
10	B	24	B
11	C	25	B
12	B		
13	B		
14	A		

VETERINARY SURGERY & RADIOLOGY

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1. Father of Veterinary radiology is
   (a) W.C. Roentgen (b) Richard Eberlin (c) Kingsman (d) Bucky
2. Contrast radiography of nasolacrimal duct is known as
   (a) Rhinography (b) Cystography (c) Dacrocystorhinography (d) Sialography
3. Quality controller in X-ray machine is
   (a) mA (b) mAs (c) KVP (d) Time factor
4. The Quantity of X-ray output in X-ray machine is determined by
   (a) KVP (b) mA (c) mAs (d) FFD
5. The motion un-sharpness during radiography are prevented by
   (a) Fixing the head tube (b) Anaestheting the patient
   (c) Placing cassette in stable position (d) All the above
6. The preservative used for preventing oxidation of developer and fixer is
   (a) Sodium Sulphate (b) Sodium Sulphite
   (c) Sodium Carbonate (d) Aluminum Hydroxide
7. Low contrast radiography is also known as
   (a) Mottled Radiograph (b) Long Scale of Contrast
   (c) Short Scale of Contrast (d) Lack of Contrast
8. The cleft palate condition is common in
   (a) Burmese Cat (b) Black Bengal Cat
   (c) Siamese Cat (d) Mongrel Cat
9. Sebaceous cyst in false nostril is known as
   (a) Acne (b) Ranula (c) Honey Cyst (d) Atheroma
10. The technique used to make an aged horse to appear young by creating infundibular marks artificially is known as
    (a) Quidding (b) Bishopping (c) Jabote d) Marsupilization
11. Localized inflammation of hair follicles of eye lashes is known as
    (a) Hardolium (b) Stye (c) Frunculosis (d) Boil
12. Inflammation of irise, ciliary body and choroid is known as
    (a) Iriditis (b) Cyclitis (c) Choroidits (d) Uveitis
13. Inflammation of mucus membrane of hard palate is known as
    (a) Palatoschisis (b) Cheiloschisis (c) Lampas (d) Gnathitis

14. The opacity of lens is known as

(a) Nebula (b) Macula (c) Amblyoma (d) Cataract

15. Abnormal retraction of eye ball into the cavity is known as

(a) Exopthalmia (b) Enopthalmia (c) Micropthalmia (d) Squint

16. The density of radiograph is directly related to

(a) mAs (b) Developing Time (c) Developer Temperature (d) All the above

17. The frequency of ultra sound probe used for large animals is

(a) 7.5 MHz. (b) 10 MHz. (c) 2.5 MHz. (d) 5 MHz.

18. Hobdaying is done for correction of

(a) Hyoid Fracture (b) Roaring (c) Chondroid (d) Uvulus

19. Blephritis is the inflammation of

(a) Cornea (b) Lens (c) Conjunctiva (d) Eye Lids

20. Ameloblastoma is the tumour arising from

(a) Gum (b) Dentine (c) Cementine (d) Ameloblast

21. Cleft palate is common in

(a) Chondrodystrophic Breed (b) Chondrohypertrophic Breed

(c) Great Dane Breed (d) Mastiff Breed

22. The chemical used for disbudding is

(a) 10% Calcium Chloride (b) 10% Calcium Carbonate

(c) 10% Zinc Chloride (d) Caustic Potash

23. Contrast radiography of the spinal cord is known as

(a) Discography (b) Myelography `(c) Medulography (d) Pyelography

24. Brachygnathism

(a) Mandible is short (b) Maxilla is short

(c) Mandible and Maxilla are equal (d) Sow Mouth

25. In diagnostic radiography the scatter radiation produce

(a) Compton effect (b) Fluroscent effect

(c) Incandisence effect (d) Sharpness effect

26. The enlargement of stomach associated with rotation on its mesenteric axis

(a) GDV (b) Pyloric Obstruction (c) Gastric Ulcer (d) Gastrinoma

27. Hernial ring located below the stifle fold is called

(a) Ventral Hernia (b) Perineal Hernia (c) Inguinal Hernia (d) Umbilical Hernia

28. Abnormal presence of air within the thoracic cavity is called

(a) Pneumo Thorax (b) Pneumocele (c) Emphysema (d) Hydrothorax

29. A condition in which the penis fails to return into the prepuce is called

(a) Priapism (b) Paraphymosis (c) Phymosis (d) Satyriasis

30. Surgical removal of the uterus and ovaries is known as

(a) Ovario-Hysterectomy (b) Ovariotomy (c) Spaying (d) Oopharectamy

31. Congenital absence of both the testicles is referred as

(a) Anorchid (b) Single Rig (c) Double Rig (d) Gubernaculum

32. Inflammation of shoulder joint is called as

(a) Gonits (b) Omarthritis (c) Coxitis (d) Cubital Arthritis

33. Atrophy of supraspinatus and infrastpinatus muscles is known as

(a) Dropped Elbow (b) Sweeny (c) Myositis (d) Cording up

34. Diapharagmatic Hernia is common in

(a) Cow (b) Buffalo (c) Sheep (d) Goat

35. Malicious cutting of Achilles tendon is referred as

(a) Tenotomy (b) Hamstringing (c) Desmotomy (d) Myotomy

36. Purulent inflammation of the cartilage of the third phalanx characterized by of the cartilage in draft horses is known as

(a) Quittor (b) Side Bone (c) Buttress Foot (d) Coon Foot

37. Intussusception is common in

(a) Duodenum (b) Rectum (c) Colon (d) Ileum

38. Belt Loop Gastropexy is a surgical technique used for correction of

(a) Pyloric Stenosis (b) GDV (c) IVD (d) Gastric Ulcer

39. Dropped elbow occurs due to

(a) Radial Nerve Paralysis (b) Supra Scapular Nerve Paralysis

(c) Ulnar Nerve Paralysis (d) Median Nerve Paralysis

40. Phalangeal exostosis is known as

(a) Splint bone (b) Spavin (c) Ring bone (d) Side bone

41. Carpitis is also known as

(a) Osselets (b) Wind Puff (c) Navicular Disease (d) Popped Knee

42. The treatment for chronic subluxation of patella in cattle is

(a) Medial patellar desmotomy (b) Median patellar desmotomy

(c) Lateral patellar desmotomy (d) Middle patellar desmotomy

43. The treatment for blemished knee is

(a) Cherry's Operation (b) Casslic's Operation (c) Caponisation (d) Pinioning

44. The typical symptom of canine hip dysplasia is

(a) Anterior drawer sign (b) Posterior drawer sign (c) Bunny hopping (d) Stifle drop

45. Liptack test is used for the diagnosis of

(a) LDA (b) TP (c) TRP (d) DH

46. Chronic hypertrophy and apparent suppuration of the horn-producing tissues of the foot, involving the frog and the sole in horses

(a) Canker (b) Thrush (c) Keratoma (d) Corn

47. The operation done for teat fistula is

(a) Gold's Operation (b) Frossel Operation

(c) Laminectomy (d) Dietrish Operation

48. The ectropion is corrected by

(a) V-y technique (b) Holtzcelsius technique

(c) Y-u technique (d) Zep's operation

49. The struvite calculi is also known as

(a) Ureate calculi (b) Cystine calculi (c) MAP (d) Carbonate calculi

50. The treatment for IVD is

(a) Laminectomy (b) Ventral Slot Technique

(c) Puduculectomy (d) All the above

ANSWER KEY

1	b	21	a	41	d
2	c	22	d	42	a
3	c	23	b	43	a
4	c	24	a	44	c
5	d	25	a	45	a
6	b	26	a	46	a
7	c	27	a	47	a
8	c	28	a	48	a
9	d	29	b	49	c
10	b	30	a	50	d
11	b	31	a		
12	d	32	b		
13	c	33	b		
14	d	34	b		
15	b	35	b		
16	d	36	a		
17	c	37	d		
18	b	38	b		
19	d	39	a		
20	d	40	c		

1	Polydiaxonone suture is							
	a	Synthetic mono-filamentous	b	Polymer of paradiaxanone	c	Absorbed in 180 days	d	All
2	Silk is treated by substance to decrease its capillary							
	a	Oil immersion	b	Wax immersion	c	Silicon immersion	d	All
3	The disadvantage of silk are							
	a	Capillary action	b	Tissue reaction	c	Cutting through tissue	d	All
4	Nylon is							
	a	Hexamethylenediamine + adipic acid combination	b	Inert, non capillary	c	Monofilament & multifilament	d	All
5	Caprolactum							
	a	Vitafil	b	Multifilament	c	Herniorrhaphy	d	All
6	Suture size used for skin and subcutis is							
	a	4-0 to 3-0	b	1 to 2	c	4 to 3	d	All
7	Suture for muscle and facial of small animals							
	a	3-0 to 0	b	3 to 1	c	6-0 to 8-0	d	None
8	Suture for cornea, nerve							
	a	6-0 to 5-0	b	6 to 5	c	2-3	d	None
9	The ultrasound cleaner cleans the instrument by							
	a	Cavitation	b	Vibration	c	Surface tension	d	All
10	The basic grips of holding scalpel are							
	a	Pencil grip	b	Finger grip	c	Palm grip	d	All
11	Catgut is prepared from							
	a	Submucosa of sheep intestine	b	Serosal layer of cattle small intestine	c	Both	d	None
12	Collagen suture is prepared from							
	a	Bovine steer flexor tendon	b	Extensor tendon	c	Both	d	None
13	PGA							
	a	Non-collagenous synthetic absorbable suture	b	Multifilamentous	c	Pliable	d	All
14	Which of the following is true regarding PGA suture							
	a	Degraded product of PGA is antimicrobial	b	Absorbed by hydrolysis	c	Absorbed in 120 days	d	All
15	Polyglactin 910 is							
	a	Braided synthetic	b	Glycolic acid :	c	Absorbed by	d	All

absorbable | lactic acid : 9:1 ration | hydrolysis in 40 to 90 days

16 The relationship between degree of differentiation and regeneration is

a Direct | b Inverse | c Indirect | d No relation

17 The cells which regenerate are

a Endodermal | b Mesodermal | c Ectodermal | d All

18 The mitotic inhibitors in tissues are

a Bradykinins | b Histamine | c Serotonin | d Epinephrine-chalone complex

19 Monocytes may become

a Epitheloid cells | b Histocytes | c Foreign body giant cells | d All

20 The wound healing is retarded by

a Hypoproteinaemia (2g. /100ml.) | b Low oxygen supply | c Uraemia | d All

21 Steroids decrease wound healing by

a Decrease in protein synthesis | b Stabilize lysosomal membrane | c Inhibit inflammation | d All

22 The vitamin A effect on wound healing is

a Increases inflammation | b Labelling of lysosome | c Stimulate fibroblasts | d All

23 Effect of vit. E on wound healing is

a Stabilizes lysosomal membrane | b Retards collagen production | c Retards wound healing | d All

24 Vit. C in wound healing is needed for

a Hydroxylation of proline | b Hydroxylation of lysine | c Secretion of collagen | d All

25 Effect of zinc on wound healing is

a Component of DNA polymerase | b Component of reverse transcriptase | c Increased levels retard healing | d All

26 The wound healing is retarded by

a Radiation and toxic drugs | b Dehydration and edema | c Infection | d All

27 The drugs which retards wound healing

a Antiseptics | b Hypertonic solutions | c Hypotonic solutions | d All

28 Golden yellow pus is produced by

a	*Corynaebacterium pyogens*	b	*Streptococci*	c	*Staphylococcus aureus*	d	*Staphylococcus albicans*

29 Thin watery pus is produced by

a	*E coli*	b	*Pseudomonas*	c	*Proteus*	d	*Shigella*

30 Greenish yellow pus is produced by

a	*Corynaebacterium pyogenes*	b	*Spherophorus necrophorus*	c	*Pseudomonas*	d	*Streptococcus equi*

31 Abnormal cavity containing pus is known as

a	Abscess	b	Phlehgman or cellulites	c	Empyema	d	Antibioma

32 The wounds get infected above the critical level of microbes

a	10^1/gm./ml	b	10^2/gm./ml	c	10^3/gm./ml	d	10^6/g./ml

33 The hospital borne infections are known as

a	Iatrogenic infection	b	Nosocominal infection	c	Super infections	d	All

34 The example for clean wounds re

a	Surgically incised skin	b	Tenotomies	c	Desmotomies	d	All

35 Clean contaminated wound produced in

a	Tracheotomy	b	Caslick's operation	c	Episiotomy	d	All

36 The golden period of wound is

a	4 hours	b	6-8 hours	c	10 hours	d	12 hours

37 The dog bite wound should not be closed because

a	Virus carried deeper	b	Infection spreads quickly	c	Bite wounds are contaminated	d	All

38 Opening of ripened abscess is known as

a	Lancing	b	Counter opening	c	Excision	d	All

39 Debridement of wound means

a	Removal of foreign material	b	Removal of devitalized tissue	c	Irrigation of wound under pressure	d	All

40 The conditions met out in autoclaving are

a	121^oC, 15 mts., 15lb/mm	b	121^oF, 15 mts., 15lb/mm	c	121^oK, 15 mts., 15lb/mm	d	None

41 The biological indicator used in autoclaving is

a	*Bacillus sterarotehrmophilus spores*	b	Paper strip	c	Both	d	None

42 Disinfection means

	a	Destruction of all microorganisms on something	b	Destruction of pathogenic organisms on inanimate objects	c	Both	d	None
43	Antiseptics are used to kill microorganisms on							
	a	Skin	b	Inanimate object	c	Air	d	All
44	Steam destroys microorganisms by							
	a	Co-agulation and penetration of cellular proteins	b	By oxidation	c	Both	d	None
45	The surgical pack placement in autoclave should be							
	a	Vertically and longitudinally	b	Horizontally and longitudinally	c	Both ways	d	None
46	The gravity displacement sterilizer works on the principle of							
	a	Air is heavier than steam	b	Steam is heavier than air	c	Both	d	None
47	The temperature, pressure, time combination is gravity displacement autoclave is							
	a	121^{o}C, 15 mts., 15lb/inch	b	250^{o} F, 15 mts., 15lb/ inch	c	250^{o}K, 15 mts., 15lb/ inch	d	None
48	Prevaccum sterilizer has							
	a	Steam injected in vacuum	b	Greater steam penetration for short period	c	270 to 275 ^{o} F (132 to 135 ^{o} C) for 3 to 4 minutes	d	All
49	The flash sterilization is done							
	a	Unwrapped, non sterile item for quick sterilization	b	Gravity sterilizer is used	c	The gravity flash sterilizer used 270 to 285^{o} F for 4 minutes	d	All
50	Ethylene oxide is							
	a	Inflammable	b	Explosive	c	Carcinogenic	d	All
51	Ethylene oxide flammability is reduced by mixing with							
	a	CO2	b	Neon	c	Both	d	None
52	Ethylene oxide can be used for sterilization of							
	a	Endoscopes	b	Cameras	c	Plastics	d	All
53	Ethylene oxide kills the organisms by							
	a	Alkyklation	b	Acetylation	c	Hydroxylation	d	All
54	The standards of Ethylene oxide are							
	a	250 to 15000 mg /Inch	b	30-60^{o} C	c	33 -60 % of humidity	d	All
55	The items sterilized by Ethylene oxide should be clean and dry because							

	a Moisture and organic material bids to Ethylene oxide	b Leaves toxic residues	c Acrylic cannot be sterilized by Ethylene oxide	d All
56	Plasma sterilization			
	a Low temperature sterilization	b Uses reactive ions, electrons, neutral atomic particles	c Vapor from of H_2O_2	d All
57	Gamma rays are used for sterilization of			
	a B.P.blade	b Catgut	c Tissue grafts	d All
58	Operation theatre is sterilised by			
	a UV rays	b Laser	c Infrared rays	d All
59	B- propiolactone is not used for sterilization of hospitals due to			
	a Damage on paints and plastic surface	b Toxic	c Carcinogenic	d All
60	Gluteraldehyde is used for sterilization of			
	a Endoscope	b Gloves	c Orthopedic set	d All
61	Drug excreted without metabolism in liver is			
	a Thiopental	b Fentanyl	c Glycopyrrolate	d Ketamine
62	The site of epidural anesthesia in dogs is at the			
	a Intercoccygeal space between duramater and periosteum	b Lumbo-sacral place, between periosteum and duramatter	c Lumbosacral place in subarachinoid space	d Lubosacral place in between piameter and arachinoid
63	Low epidural anesthesia paralyses			
	a Hind limb	b Abdomen	c Perineal region	d Thoracic region
64	The local anesthesia that blocks both sensory and motor nerve for 2-3 times more than lidocaine or mepivocaine is			
	a Lignocaine	b Tetracaine	c Bupivacaine	d Novocaine
65	Epidural anesthesia is contra indicated in			
	a Infection	b Hypotension	c Hemorrhages	d All
66	Spinal anesthesia induces hypotension due to			
	a Post ganglionic sympathetic blockage	b Preganglionic sympathetic blockade	c Preganglionic para sympathetic blockade	d Post ganglionic parasympathetic blockade

67 Ketamine causes

a Tachycardia and hyperthermia
b Increased IOP and intracranial pressure
c Increased myocardial oxygen consumption
d All

68 Ketamine is anesthetic of choice in

a Brady cardiac dogs with upper airway obstruction
b Cats with hyperthyroidosis and tachycardia
c Cats with urethral obstruction
d All

69 Major drugs which are used as preanaesthetics are

a Phenothiazine derivatives
b Anticholinergics
c Opiods
d All

70 Which of the following statement is correct

a Tiletamine is a benzodiazepine
b Propofol is a thiobariturate
C Thiamulal is a dissociate anesthetic
d Zolazepam is a long acting benzodiazepine

71 Example for neuroletpic analgesia is

a Glycol pyrrolate and promazine
b Etorphine and Nalaxone
C Diazepam and neostigimine
d Fentanyl and Droperidol

72 The drug which produces visceral analgesia is

a Succinyl Choline
b glycopyrrolatge
C ketamine
d thiopental sodium

73 The animals are premedicated before anesthetic with the intention of

a Abolishing pain
b Ease out handling
c Increase reflex sympathetic activity
d Increase margin of safety by reducing the dose of general anesthetic

74 Atropine acts on post ganglions of cholinergic nerves by

a Reducing formation of acetyl choline
b Blocks release of acetyl choline
c Blocks choline esterase enzyme
d Competitively blocks

acetyl choline at muscranic receptor

75 Atropine produces tachycardia by

a vagolytic action b vagotonic action c Cardiac chronotropism d Myocardial stimulation

76 The main difference between atropine and Robinol V is

a Atropine produces more tachycardia than Robinol – V b Rabinol – V produces more tachycardia than atropine c Both produce equal chronotropism on heart d Atropine is powerful antisialogaoue than glycopyrrolate

77 Phenothiazine does not produce which of the following effects on the CNS

a Depression of chemoreceptor trigor zone b α_2 - adrenoceptor agonist action c Tranquilization d Antihistaminic action

78 Acepromazine produces paraphimosis in

a Colts b Stallions c Geldings d Filleys

79 Guafensin, a muscle relaxant

a Acts on CNS b Acts at myoneural junction c Acts as internunical neurons at spinal cord d Acts at ANS

80 A tranquilizer having muscle relaxation effect is

a Glycopyrrolate b Butorphanol c Succinyl choline d Diazepam

81 In equines, deaths are associated with

a Respiratory muscle paralysis b Skeletal muscle rigidity with cardiac arrest and respiratory failure c Hypotension d Respiratory centre depression

82 If you administer 100ml of 5 % solution of guanfensin to 200Kg. horse, what is the dose

a 250mg. b 75 mg. c 300mg. d 5000 mg.

83 Succinyl choline

a should be used with IPPV b Can be used without IPPV c Produces effect on CNS d Relaxes cardiac muscles

84 Altracurium has advantage over succinyl choline

a It causes direct muscle relaxation b It causes muscular rigidity c Does not relax diaphragm d Does not relax respiratory muscles

85 Patients under general anesthesia with sever bradycardia , the administration of nestigmine produces

a Tachycardia b Bradycardia due to inhibition Ach c Bradycardia due to inhibition AchE d No effect on heart rate

86 In the CNS, Medetomidine causes

a Antagonism to K receptor b Agonist to sigma receptor c Agonist to presynaptic alpha 2 adrenergic receptor d Antagonist to post synaptic alpha 1 adregnergc receptor

87 In cattle, xylazine premedication causes

a Tachycardia b Bradycardia c Increased cardiac output d Decreased CVP

88 Xylazine contraindicated in

a Pregnancy b ETT c Urolithiaisis d All of the above

89 Narcotic pure agonists produce analgesia by primarily their effect on

a Alpha 2 receptor b GABA receptor c Mu-opiate receptor d Sigma opiate receptor

90 Most potent narcotic among the following is

a Morphine b Fentanyl c Carfentanyl d Etorphine

91 The perfect reversal agent of narcotics is

a Diprenorphine b Levallophan c Nalaxone d Nalorphine

92 The drug producing cycloplegic effect on ciliary body is

a Triflupromazine b Promazine c Atropine d Acepromazine

93 Phenothiazines are used in urolithiasis because

a	They relax urinary bladder	b	They relax retractor penis muscle	c	They cause diuresis	d	They reduce calculi formation

94 Atropine sulphate is contraindicated in

a	Intussusceptions	b	Bovines premedication	c	Equines	d	All

95 The patients with Mendelson syndrome are premeditated with

a	Atropine	b	Hom atropine	c	Glycopyrrolate	d	All

96 Preanaesthetic of choice in equines is

a	Chlorpromazine	b	Triflu promazine	c	Acepromazine	d	Promazine

97 Morphine produces

a	Increased tone in gastrointestinal sphincter	b	Decreased tone in gastrointestinal sphincter	c	Increased peristaltic movement	d	Atonic gastrointestinal effect

98 I/V administration of Fentanyl to dogs causes

a	Tachycardia	b	Hypertension	c	Bradycardia	d	SA block

99 Opiate induced respiratory depression can be reversed perfectly by

a	Xylazine	b	Nalorphine	c	Nalaxone	d	Doxapram

100 Thiobariturates

a	Produce transient apnea and cardiac arrhythmia	b	Long acting	c	Prolonged induction time	d	Do not under go ionization plasma.

101 General anesthesia induced with thiamylal sodium in dog and maintained with halothane in closed circuit and animal develops apnea such cases can be managed by

a	Dorapram injection	b	IPPV with slow breath rate	c	Pure oxygen administration	d	Coramine with lidocaine I/V

102 Thiopental in cats produce

a	Barbiturate slough on I.M. administration	b	Laryngeal and cough reflex in light levels	c	Transient apnea	d	All

103 Propofol

a	Dissolved in soyabean oil-egg lecithin emulsion	b	Should be used as single dose	c	Can be stored at room temperature	d	All

104 Ketamine is used in animals with

a impaired CV functions b Produces seizures in dogs c Can be combined with α 2 adrenoreceptor agonists d All

105 Dobutamine administration to cattle under halothane produces

a Ventricular bigeminy b Ventricular trigeminy c Inverted T- wave d Sinus tachycardia

106 Telazol prolonged recovery in pigs is due to

a Tletamne b Mannitol c Zolazepam d Lorazepam

107 Drug having oxytocic effect on bovine uterus in 3rd trimester of pregnancy is

a Detomedine b Xylazine c Trilfupromazine d Medazolam

108 Fasting in equines helps in

a Preventing stomach rupture b Reduces the extent of lung collapse c Prevents residual food material of mouth entering trachea d All

109 In a to and fro anesthesia breathing system

a Canister is placed between patient and rebreathing bag b Mechanical dead space is less than circle system c Gases pass through canister not during inhalation and exhalation d All

110 In I/V retrograde regional anesthesia

a Adrenaline containing local anesthetic should not be used b Haematoma formation can occur in vein used for local anesthetic administration c Tourniquet should not be left in situ for more than 30 minutes d All

111 The Peterson block desensitizes

a V cranial nerve b X cranial nerve c VII cranial nerve d III, IV and VI cranial nerves

112 Anesthetic technique used for placement of nose ring in bulls

a Mandibular nerve block b Mental nerve block c Supraorbital nerve block d Bilateral infraorbital nerve block

113 The principle of ultrasound scanning is

a refraction b diffraction c Polarization d Pulse- echo principle

114 The image produced by bone on the ultrasound machine monitor will be

a hypo echoic b anechoic c Hyper-ehoic d None

115 The pregnancy diagnosis in bitch is done as early as by ultrasound

a 38 days b 10 days c 45 days d 55 days

116 IVD is common in

a German shepherd b Labrador c Mastiff d Daschound

117 Fredt Ramsted pyloromyotomy is used to correct

a Polyric stenosis b GDV c Gastric ulcer d Zollinger Ellison syndrome

118 Ground glass appearance of radiograph seen in

a Fracture b dislocation c pneumonia d Ascites

119 Filling defect are seen in

a Gastric ulcer b Intersusceptio n c volvulius d Torsion

120 Ping sound heard in

a LDA b TRP c Caecal dilation d DH

121 Sausage like mass on per rectal examination in LA

a Intussusceptions b hernia c prolapse d Rectal tears

122 Urolithias in bullock

a Urethral pulsation b Urinary bladder distention c Both d None

123 Slab fractures are common in

a Metatarsal b Radius and ulna c Acessory carpal and tarsal d None

124 Horn cancer shows

a Cell nests b Cauliflower like growth c Bull eye is exfoliative cytology d All

125 Eye cancer common seen at

a lumbus b Sclera c Cornea d Eyelids

126 Phacoemulsification is used for the treatment of

a Keratitis b Cornel ulcer c Cataract d Blephritis

127 Surgical opening of crop in birds is known as

a Ingluvotomy b Uvalotorny c Caponisation d Pinionuy

128 Vincrystacin for the treatment of TVT is used at close rate of …….. for 4 weeks at weekly interval

a 0.025 mg/kg i/v b 0.25mg/kg i/v c 2.5mg/kg i/v D 25mg/kg i/v

129 The orthopaedic implant which neutralizes all forces acting on bone

a DCP b IMP c K-Nail D V-nail

130 Bocor's operation is used for

a Teat fistula b String halt c Gonitis d Spavin

131 Z- plasty is used for

a Knuckling b Pervious c Persistant d Marsupilization

urachus frenulum

132 The common seat of calculi lodgment in Ram is

a Ischial arch b Sigmoid flexure c Urethra process d Glans penis

133 Pus in the antrum involves

a Carnasial tooth b Maxillary sinus c Both d None of the above

134 Sun burst appearance is seen in

a Osteosarcoma b Fibrosarcoma c Fracture d Dislocation

135 Grids are used when past thickness is more than

a 10 cms b 10 mm c 10 µ d 10 Å

ANSWER KEY

1	d	21	d	41	a	61	b	81	b	101	b	121	a
2	d	22	d	42	b	62	b	82	d	102	d	122	c
3	d	23	d	43	a	63	c	83	a	103	d	123	c
4	d	24	d	44	a	64	c	84	a	104	d	124	d
5	d	25	d	45	a	65	d	85	c	105	a	125	a
6	b	26	d	46	b	66	a	86	b	106	c	126	c
7	a	27	d	47	a	67	d	87	d	107	b	127	a
8	a	28	c	48	d	68	d	88	c	108	d	128	a
9	a	29	a	49	d	69	d	89	d	109	d	129	a
10	d	30	c	50	d	70	d	90	c	110	d	130	b
11	c	31	a	51	c	71	d	91	c	111	d	131	a
12	a	32	d	52	d	72	c	92	c	112	d	132	c
13	d	33	b	53	a	73	d	93	b	113	d	133	c
14	d	34	d	54	d	74	d	94	d	114	c	134	a
15	d	35	d	55	d	75	a	95	c	115	a	135	a
16	b	36	b	56	d	76	b	96	d	116	d		
17	a	37	a	57	d	77	b	97	a	117	a		
18	d	38	d	58	a	78	b	98	c	118	d		
19	d	39	d	59	d	79	c	99	c	119	a		
20	d	40	a	60	d	80	d	100	a	120	a		

ANIMAL NUTRITION

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1. The difference between plants and animals is that the plant contain :
   a. Glycogen b. Starch c. Globulin d. None of these
2. Average Nitrogen content of protein is :
   a. 15.5 b. 17.0 c. 16.5 d. 16.0
3. End product of carbohydrate digestion in non-ruminant is :
   a. Glycogen b. Glucose c. Volatile fatty acids d. Maltose
4. Pica is a condition in cattle caused by deficiency of :
   a. Calcium b. Phosphorus c. Magnesium d. Sulphur
5. Water requirement is related to :
   a. Energy intake b. Mineral intake c. Dry matter intake d. Protein intake
6. Heat increment is the heat lost as :
   a. Post absorptive state b. Vigorous exercise c. Excess energy intake d. None
7. Essential fatty acid for farm animal is:
   a. Linolenic acid b. Butyric acid c. Octanoic acid d.Lauric acid
8. Anti sterility vitamin is:
   a. Cynocobalamine b. Tocopherol c. Ergosterol d. None of these
9. Vitamin G is also known as:
   a. Thiamine b. Riboflavin c. Pyridoxine d. Niacin
10. Gross energy can be determined by:
    a. Carbon Nitrogen balance b. Adiabatic calorimeter
    c. Thermometer d. Bomb-Calorimeter.
11. In ruminants methane energy lost as % of GE intake:
    a. 5-7 % b. 8-10 % c. 11-12 % d. 13-15 %
12. Sulphur containing amino acid is:
    a. Tryptophane b. Lysine c. Methionine d. Citrulline
13. Avidine is an anti metabolite for:
    a. Choline b. Folic acid c. Lipoic acid d. Biotin
14. Urea is best utilized by ruminants in presence of:
    a. Protein b. Available carbohydrate c. Fat d. Minerals
15. Osteomalacia is a condition usually seen in:
    a. Dry non pregnant b. Young c. Growing animals d. Adult animals

16. Heat production in animal varies with:

a. Body weight b. Body size c. Metabolic body size d. None

17. Antibiotics feed additives in pre-ruminants calves are recommended because it:

a. Reduces calf scours b. Increase Palatability

c. Early maturity d. None of these

18. Zinc deficiency in pigs and cattle causes:

a. Para tuberculosis b. Parathyroid diseases c. Parakeratosis d. Perosis

19. By-Pass protein indicate protecting high quality protein from microbial degradation in:

a. Rumen b. Small intestine c. Large intestine d. Rectum

20. Vitamin E and selenium are:

a. Antagonistic b. Inter-related c. Non-related d. None of these

21. Alkali disease is caused by:

a. Feeding alkali treated feed b. Excess intake of NaoH or bicarbonate

c. Deficiency of fluorine d. Toxicity of selenium

22. Steely wool condition is due to deficiency of:

a. Iron b. Copper c. Lead d. None of these

23. The feeds rich in unsaturated fat produced:

a. Soft body fat b. Oily body fat c. Hard body fat d.None of these

24. Cellulose is having glucose linkages-

a. ά type b. β type c. Both d. None

25. Feeds having CF content <18% & >18% considered in category of following respectively

a. Concentrate & Roughage b. Roughage & Concentrate

c. None d. Both

26. Nitrogen free extracts includes-

a. Carbohydrate b. Protein c. Minerals d. Vitamins

27. Acid and base balance in body is regulated by-

a. Na b. K c. Cl d. All

28. Cannibalism in chicks is the deficiency symptom of –

a. Na b. Ca c. P d. Zn

29. Excessive salt intake increased the requirement of –

a. Carbohydrates b. Protein c. Fat d. Water

30. In ruminants diet proper ratio of Nitrogen to Sulphur is –

a. 10:1 b. 20:1 c. 5:1 d. None

31. Goiter develops mainly in hilly regions due to leaching of which of the following element from soil-

a. Fe b. Cu c. I d. Zn

32. Dental carries are mainly associated with element-

a. F b. P c. Cu d. Mn

33. Xanthine oxidase required for uric acid synthesis, have element in its structure-

a. Mn b. Cu c. Mo d. Zn

34. The term Vitamine was given by-

a. Funk b. Kellner c. Mulder d.Levoisier

35. Tryptophan amino acid works as precursor for synthesis of vitamin-

a. Folic acid b. Pyridoxine c. Niacin d. Cynocobalamine

36. Antibiotic is most effective under the condition-

a. Hygienic b. Unhygienic c. Sterile d.None

37. In cat taurine deficiency leads to ……..

a. Ascitis b. Retinal degeneration c. goiter d.None

38. Fatty acids are oxidized physiologically by –

a. ά-oxidation b. β-oxidation c. δ-oxidation d.None of the above

39. "Goose stepping" in pigs is related to deficiency of:

a. Pyridoxine b. Biotin c. Pantothenic acid d. Manganese

40. Structural and reserve material in plants:

a. Protein b. Carbohydrate c. Silica d.Fiber.

41. Maintenance type of roughage have DCP % about:

a. 3-5 b. 5-7 c. 7-9 d. 9-11

42. Who is acknowledged as the "Founder of the science of nutrition/Father of Nutrition?

a. Santario Sanctorius b. Antoine Laurent Lavoisier

c. Lazaro spallanzani d.Francois Magendie

43. Which of the following is having highest biological value?

a. Meat b. Egg c. bone d. Soybean

44. Complete development of rumen occurs at the age of :

a. 3 months b. 6 months c. 9 months d. 12 months

45. Ascorbic acid is easily destroyed by:

a. Heat b. Light c. Oxygen d.Carbon di-oxide

46. Which volatile fatty acid is responsible for milk fat synthesis -

a. Acetate b. Propionate c. Butyrate d. None

47. Which volatile fatty acid is responsible for glucose synthesis in cow-

a. Acetate b. Propionate c. Butyrate d. None

48. Urea can replace about …… percent of DCP requirement

a. 10-20 b. 20-30 c. 30-40 d. 50-60

49. Net gain of ATP per mole of acetic, propionic and butyric acid are…… moles, …… moles and …….moles respectively

a. 10, 17, 25 b. 10, 20, 30 c. 5, 14, 18 d. 15, 10, 27

50. Net yield of ATP per mole of glycerol is ……..

a. 11 b. 19 c.33 d. 44

51. In poultry the feed intake will be higher when-

a. Feed rich in energy b. Feed poor in energy

c. Feed rich in protein d. All of the above

52. Greater the food intake results in –

a. Lesser MFN b. Greater MFN c. MFN is not affected d. Any

53. Precursor of prostaglandin is –

a. Linoleic acid b. Palmitic acid c. Linolenic acid d.Arachidonic acid

54. Essential amino acid was invented by –

a. Muller b. W.C. Rose c. Wolf d. Mulder

55. Solution with amino acid at which pH value it is electrically neutral-

a. Isometric pH b. Isocitric pH c. Isoelectric pH d.Isogenic pH

56. Which type of bond is found between two amino acid-

a. Low energy bond b. High energy bond c. Double bond d.Peptide bond

57. Parathormone causes which of the following –

a. Increase blood Ca level b. Decrease in blood Ca level

c. Both a and b d. None of the above

58. The bacteria are unable to use NH3 effectively, if its rumen concentration per 100 ml exceed (in mg)-

a. 5-8 b. 12-15 c. 18-22 d. 24-28

59. The recommended level (%) of urea in total diet dry matter of dairy cattle is –

a. 1 b. 4 c. 6 d. 8

60. Number of protozoa per ml of rumen content is approximately-

a. 10^6 b. 10^8 c. 10^9 d. None above

61. Cobalt element present in which of the following vitamin –

a. B_1 b. B_2 c. B_6 d. B_{12}

62. "Curled toe paralysis" in the chicken is caused by the deficiency of –

a. B_1 b. B_2 c. B_6 d. B_{12}

63. Sun shine works as a source of vitamin-

a. Thiamine b. Biotin c. Cholecalcifarol d. Pyridoxine

64. Vitamin concern with the prevention of perosis is:

a. Thiamin b. Riboflavin c. Choline d. Niacine

65. Sway back in lambs is related to the deficiency of-

a. Selenium b. Copper Manganese d. Cobalt

66. Is called as "Animal Protein Factor":

a. Vitamin A b. Vitamin B_{12} c.Vitamin B_2 d. Vitamin B_6

67. Is referred as "Lipotropic factor":

a. Choline b. Biotin c. Thiamine d. Niacin

68. Is a component of glutathione peroxidase?

a. Selenium b. Zinc c. Manganese d. Copper

69. Sulphur is a constituent of:

a. Insulin b. Cobalamine c. Histidine d. Pyridoxine

70. "Stringy wool" is related with the deficiency of:

a. Zinc b. Iron c. Copper d.Manganese

71. Best measure of protein quality in poultry is:

a. Crude protein b. PER c. NPU d.BV

72. Most of the amino acids are absorbed from-

a. Caecum b. Colon c. Rectum d. Small intestine.

73. The potent natural antioxidant vitamin is:

a. Vitamin A b. Vitamin E c. Vitamin C d. Vitamin K

74. Ultra trace element is

a. Co b. Cu c. Fe d. Zn

75. Blood calcium level varies between-

a. 9-11mg/100ml b. 4-9mg/100ml c. 2-5mg/100ml d.None.

76. Grass tetany/grass staggers is due to deficiency of –

a. Ca b. P c. Mg d. Mn

77. Which element works as glucose tolerance factor-

a. Se b. Cu c. Cr d. Ni

78. As a basic role of Cell integration which of the Vitamin works a "Anti-Infective Vitamin"-

a. Vitamin D b. Vitamin E c. Vitamin C d. Vitamin A

79. Which of the following element work as substitute of antibiotics in simple stomach animals-

a. Cu b. Fe c. Zn d. Mn

80. Probiotic's literary meaning is –

a. For life b. Against life c. None d.Both

81. Probiotics may be recognized as –

a. Direct fed microbials (DFM) b. Indirect Fed Microbials (IFM)

c. None d. Both

82. On fat and moisture free body what is the ratio of protein and ash-

a. 80% and 20% b. 60% and 40% c. 40% and 60% d.20% and 80%

83. Digestion in mouth get started with the help of enzyme-

a. Amylase b. Lipase c. Pepsin d.Trypsin

84. Enzyme is essential for milk digestion-

a. Pepsin b. Trypsin c. Rannin d.Chymotrypsin

85. Which acid is helpful in digestion at stomach-

a. Hydrochloric acid b. Sulphuric acid c. Nitric acid d. Perchloric acid

86. pH of the stomach is about-

a. 2 b. 4 c. 6 d. 8

87. Bile is useful in digestion of-

a. Carbohydrate b. Protein c. Fat d.Vitamins

88. The relationship between body water and fat content is –

a. Inverse relationship b. Direct relationship c. Both d. None

89. For young growing animals most limiting nutrient is –

a. Carbohydrate b. Protein c. Fat d. None

90. Normal blood Ca level is maintained by Hormone-

a. Paratharmene b. Calcitonine c. Both d. None

91. Use of raw fish leads to deficiency of-

a. Vitamin B_1 b. Vitamin B_2 c. Vitamin B_6 d. Vitamin B_5

92. Glucose is capable to produce energy is aerobic condition-

a. 8 ATP b. 38 ATP c. 20 ATP d.30 ATP

93. The least digestible portion of feed is-

a. Carbohydrate b. Cellulose c. Hemicellulose d.Lignin

94. One mole of glucose and fructose both produces by the digestion of –

a. Sucrose b. Maltose c. Lactose d.All

95. The Endogenous urinary nitrogen is expressed as –

a.g/100kg of Body weight b. Per unit of metabolic body size

c. None of the above. d. All of the above.

96. Calorie: Protein ratio in broiler starter and broiler finisher must be ……and …… respectively.

a. 139:1, 160:1 b. 122:1, 145:1 c. 129:1, 155:1 d. 139:1, 175:1

97. Calorie: Protein ratio in layer starter and layer grower ration must be ……..and …… respectively.

a. 130:1, 156:1 b. 125:1, 145:1 c. 136:1, 148:1 d. 137:1, 158:1

98. Calorie: Protein ratio in layer must be ……..

a. 170:1 b. 180:1 c. 145:1 d.190:1

99. Under normal diets acetic, propionic and butyric acid among VFAs in rumen represents……%.....%, and…..%, respectively.

a. 70, 18, 12 b. 50, 25, 25 c. 60, 20, 20 d. 40, 40, 20

100. Gas in rumen represents CO2 and methane ……, and …… percent.

a. 20, 80 b. 80, 20-30 c. 80, 20 d.50-60, 30-40

101. Which of the following part of cow's stomach resembles the true stomach of non ruminants-

a. Rumen b. Reticulum c. Omasum d. Abomasum

102. Methane contains energy approximately to a tune of –

a. 13.34 Kcal/g b. 23.34 Kcal/g c. 3.34 Kcal/g d. None of these

103. Under normal conditions, the pH of rumen liquor is maintained at-

a. 3.5-4.0 b. 5.5-6.5 c. 7.0-7.5 d.None

104. How many amino acids are found dietary essential in poultry-

a. 8 b. 10 c. 11 d. 12

105. Feeding of monansin in diet increases the production of VFA in rumen:

a. Acetate b. Propionate c. Lactate d. Butyrate

106. Easily fermentable carbohydrate reduces the digestion of fiber:

a. True b. False c. Can't say d. Sometimes

107. Lower methane production is associated with the production of VFA:

a. Acetate b. Propionate c. Lactate d. Butyrate

108. Bulk is mainly essential in the diet of:

a. Cow b. Poultry c. Swine d. All the above

109. Fine grinding of hay……. the digestibility.

a. Increases b. Decreases

c. Did not affect d. Increase the acetate production

110. Balance or retention studies may be performed by conducting

a. Digestion trial b. Metabolism trial c. Both d. None

111. Internal indicator used in determining digestibility is

a. Lignin b. Acid insoluble ash c. Silica d. All of the above

112. Total digestible nutrients (TDN) term as such is not correct due to inclusion of which nutrient:

a. Carbohydrates b. Protein c. Fat d. All of the above

113. Wide nutritive ratio is obtained in case of:

a. Wheat straw b. Ground nut cake c. Soybean meal d. Linseed cake

114. Highest metabolic or oxidation water is produced by one gram of :

a. Carbohydrates b. Protein c. Fat d. Same in all nutrients

115. Metabolic water comprises ……% of total water requirements.

a. 5-10 b. 15-20 c. 25-30 d. 35-40

116. One gram of hydrogen and carbon produces kcal energy, respectively.

a. 34.5 and 8 b. 8 and 34.5 c. 12 and 34.5 d. 34.5 and 12

117. Which if the following is not a carbohydrate:

a. Cellulose b. Hemicellulose c. Lignin d. All the above

118. One mole of pyruvate may produce how many moles of ATP in TCA cycle:

a. 12 b. 15 c. 18 d. 16

119. Blood glucose level in ruminants …… with increasing the age.

a. Increases b. Decreases c. Both d. Can't say

120. Which type of rancidity produces nutritional losses of fats?

a. Hydrolytic b. Oxidative c. Both d. None

121. Micelle has a diameter of……

a. 30-100 A^o b. 130-200 A^o c. 230-300 A^o d. None

122. Chylomicrone have a diameter of……

a. 75-200 A^o b. 200-300 A^o c. 300-800 A^o d. > 800 A^o

123. Fat absorption takes place with the help of:

a. Bile salts b. Phospholipids c. Cholesterol d. All the above

124. Higher amount of PUFA in diet will increase the demand of:

a. Vitamin A b. Vitamin E c. Vitamin C d. Vitamin D

125. Early cut pasture and grains will having higher amounts of:

a. Total protein b. NPN c. Fat d. Carbohydrate

126. High quality protein is required in the diet of

a. Cow b. Goat c. Poultry d. All the above

127. Addition of most critical amino acid in the diet of simple stomached animal will reduces the requirements of

a. Protein b. Carbohydrate c. Fat d. Minerals

128. True digestibility of protein remains…… to that of apparent

a. Higher b. Lower c. Same d. None

129. By pass protein is high in

a. Urea b. Casein c. Maize d. Barley

130. Yield of microbial protein varies between……..g/kg of organic matter digested.

a. 20-250 b. 90-230 c. 150-400 d. 200-450

131. Biological value of microbial protein is about

a. 58% b. 68% c. 78% d. 88%

132. Heat treatment of protein reduces the protein quality affecting mainly the amino acid

a. Leucine b. Isoleucine c. Methionine d. Lysine

133. Synthesis of non essential amino acid takes place in the body with the help of

a. Lysine and methionine b. Tryptophen and lysine

c. Alanine and Aspartate d. None of the above

134. Antagonism obtained in which of the following amino acids

a. Lysine and Arginine b. Valine - leucine and isoleucine c. Both d. None

135. Nutritional secondary hypothyroidism observed by feeding of only

a. Fruits and nuts b. Grain diet c. Meat diet d. All the above

136. Pellagra is produced by the deficiency of

a. Niacin b. Thiamin c. Pyridoxin d. Cynocobalamin

137. Chlorine in the body present in the form of

a. Extracellular b. Intracellular c. Both d. None

138. Falling disease is due to deficiency of

a. Ca b. Cu c. Zn d. Se

139. Ruminant body requires which of the following as essential constituents

a. Co b. Vitamin B_{12} c. Co +Vitamin B_{12} d. None

140. Feeds of Brassica family are mainly associated with deficiency of

a. Cu b. Zn c. Se d. I

141. Sulfur deficiency reduces the digestibility of

a. Protein b. Celllulose c. Carbohydrates d. NPN

142. Molybdenum toxicity shows the deficiency signs of

a. Cu b. Zn c. Mn d. Fe

143. Toxicity and deficiency is very common in which of the following minerals

a. F b. Se c. Mo d. All the above

144. Retinoic acid performs all the functions of vitamin A except

a. Vision b. Reproduction c. Both d. None

145. Which of the following works as hormone?

a. 1,25 dihydroxy cholecalciferol b. Vitamin D

c. Vitamin A d. Ergosterol

146. Stiff lamb disease produces due to deficiency of vitamin

a. A b. E c. Biotin d. Thiamin

147. Chastek paralysis observed due to deficiency of vitamin

a. B_1 b. B_2 c. B_3 d. B_5

148. Growth stimulants are

a. Antibiotics b. Arsenicals c. Hormonal compound d. All

149. Copper sulfate is used as growth promoter@ of

a. 10ppm b. 50ppm c. 100ppm d. 200ppm

150. Which of the followings helps in the transfer of single carbon unit?

a. Thiamin b. Folic acid c. Pantothenic acid d. Pyredoxine

151. No. of fermentation vessels present in RUSITEC ?

a) 8-12 b. 5 c.1 d. 25

152. Fasting metabolism at its minimum rate is also known as.....

a) Basal Metabolism b. Basal mechanism

c. Basal catabolism d. Basal feed

153. Normal losses of nitrogen through hair, nail, skin is .....

a. 0.02gm N /day b. 0.2gm N /day c. 0.8 gm N /day d. 2gm N /day

154. The MFN value for Indian buffalo is .....

a. 0.36 gm/100 gm DMI b. 0.91 gm/100 gm DMI

c.0.1 gm/100 gm DMI d. 3.6 gm/100 gm DMI

155. Primary source of contamination In poor quality silage/ big bale silage is .....

a. Listeria Monocytogens b. Bacillus bovis c. Clostridia chauvi d. none

156. NIR technique uses.....

a) reflectance of light b. absorption of light c. both d. none

157. Sugarcane bagassae contains.....% CP

a) 22% b. 1.2-2% c. 4.2-5 % d. 8-9 %

158. Condensed molasses soluble is also known as.....

a) Press mud b. jaggary c. Dried yeast sludge d. none

159. Press mud is rich source of.....

a) Ca b. Mg c. Cr d. Cu

160. Tapioca leaves contains.....

a) Tannin b. Saponine c. Protease inhibitor d. HCN

161. The antinutritional factor present in bamboo leaves is.....

a) HCN b. Lipogenic factor

c. oestrogenic factor d. goiterogenic factor

162. Sea weeds are only source of.....

a) Agar Agar b. Algin c. both d. none

163. Feather meal provides..... for chick growth

a) Thiamine b. riboflavin c. niacin d. vitamin B_{12}

164. 1 KCAL is equal to.....

a) 4 BTU b. 2 BTU c. 6 BTU 8 BTU

165. RQ of Protein is at around.....

a) 1 b. 0.83 c. 1.9 d. 1.11

166. BIS is established in.....

a) 1989 b. 1977 c. 1986 d.1981

167. The no. of gram + ve bacteria tends to increase in.....

a) Low energy diet b. high energy diet c. high roughage diet d. none

168. No. of methanogens present in rumen on normal ration is .....

a) 10^1 to 10^2 / ml rumen liquor b. 10^7 to 10^9 / ml rumen liquor

c. 10^3 to 10^5 / ml rumen liquor d. 10^{12} / ml rumen liquor

169. Poultry excreta contains about.....

a) 10 % CP b. 11 % CP c. 15 % CP d. 25 % CP

170. In very good silage the pH should be .....

a) 1-2 b. 3.8-4.2 c. 5-6 d. 6-7

171. Kunits inhibitor inhibits only.....

a) Trypsin b. chymotrypsin c. both d. none

172. The example of saponine binder is.....

a) Cholesterol b. cotton seed oil c. both d. none

173. The feeding standard in which quantity and quality of milk is taken in to consideration.....

a) Ray b. Morrison c. T.L.Hacker d. ICAR

174. Yeast which produces Lasolasid .....

a) Streptomyces Lasoliensis b. Bacillus anthracis c. both d. none

175. "wasting disease " is also known as .....

a) Lechsucht b. copper pine c. Both d. None

176. Choline is constitute of.....

a) Terpene b. phospholipid lecithin c. lignin d. none

177. "Pithed Frog position" is the condition caused by deficiency.....

a) Vitamin D b. Vitamin C c. Vitamin K d. Vitamin E

178. Iodine no for butter fat is .....

a) 30 b. 40 c. 50 d. 60

179. Length of chain of fatty acid is measured by.....

a) Acid no. b. Iodine no. c. saponification no. d. Saturation no.

180. Acid value indicates presence..... of in fat.

a) Free organic acids b. free fatty acids c. free keto acids d. none

181. NR ratio of starter feed in pig is.....

a) 1:1 b. 1:2 c. 1:5 d. 1:7

182. Required level of iodinated casein in poultry is .....

a) 110-220mg/ kg feed b. 500 mg/ kg feed

c. 50 mg/ kg feed d. 800 mg/ kg feed

183. Crude fibre level in gestating sow is.....

a) 3-4 % b. 6-7 % c. 8-9 % d.10-12 %

184. Starch can't be fed to pig up to.....

a) 1 wk of age b. 2 wks of age c. 4 wks of age d. 5 wks of age

185. Amount of dietary protein metabolised in body is.....

a) 24 % b. 50 % c. 75 % d.100 %

186. Loss of dry matter in ruminant due to affluent is.....

a) 100 % b. 10-60 % c. 80 % d.70 %

187. In dry alfa alfa % of vitamin D is .....

a) 1 % b. 3 % c. 5 % d. 8 %

188. Volatile fatty acids absorbed in .....

a) Anionic form b. Cationic form c. both d. none

189. Amino acid absent in protein collagen is .....

a) Cystine b. methionine c. tryptophan d. valine

190. Animal body contains calcium.....

a) 1.3 % b. 2.3 % c. 3.3 % d.4 %

191. Animal body contains sulphur.....

a) 0.1 % b. 0.2 % c. 0.4 % d.0.6 %

192. Avg size of fat globules in cow is.....

a) 10-12 microns b. 20 microns c. 30 microns d. 40 microns

193. % content of linoleic acid in pig ration should be.....

a) 0.11 % b. 0.22 % c. 0.33 % d.0.44 %

194. Protamines are basic proteins of low molecular weight which are rich in .....

a) Methionine b. arginine c. lysine d.valine

195. Dietary requirement of selenium in sheep and cattle is .....

a) 0.1 ppm b. 1 ppm c. 2 ppm d.3 ppm

196. The term BV coined by…….

a) Maynard b. Crompton and Harrisl c. W C Rose d.Weende

197. Starch equivalent of linseed cake is.....

a) 46 b. 56 c. 66 d. 76

198. Phosphatydil choline is.....

a) Lecithin b. choline c. valin d. proline

199. Breeding buck s/b fed at the rate of.....

a) 2 % of BW b. 3-3.5 % of BW c. 5 % of BW d. 7 % of BW

200. ME in oilcakes and meals in % of DE .....

a) 69 % b. 79 % c. 89 % 99 %

201. Faecal energy losses in cattle and buffalo ranges from.....

a) 40-50 % b. 60-70 % c. 80 % d. 90 %

202. In animals bones contains magnesium up to.....

a) 1.5 % b. 2.5 % c. 3.5 % d.4.5 %

203. The percentage of glucose in honey is.....

a) 30 % b. 40 % c. 50 % d. 60 %

204. Peripheral dermatitis caused by deficiency of……..

a) Vit. B_6 b. Vit. B_3 c. Vit. B_1 d. Vit. B_5

205. Example of pentose sugar is……..

a) Arabinose b. xylanose c. glucose d. none

206. Amino-succinic acid is a structural name of ……

a) Glutamic acid b. Aspartic acid c. Acetic acid d. Linoleic acid

207. Highest activity amongst essential fatty acid shown by…….

a) Lenoleic acid b. Oleic acid c. Arachidonic acid d. lenolenic acid

208. Cephalin is a component of…….

a) Thiamine b. lenolin c. Thromboplastin d. none

209. The no of essential fatty acids in Pig ……

a) 5 d. b. 6 c. 10 d. 8

210. Iron causes……. type of rickets

a) Phosphorous b. calcium c. Vit. D d. none

211. Element essential for heart beat relaxation…….

a) Na b. Cl c. K d. Ca

212. Which elements causes deficiency of magnesium ……..

a) K b. NH_4 c. Both d. None

213. In plasma iron is present as…….

a) Ferritin b. Transferrin c. Haemosidrin d.None

214. Excretory product of selenium are …….

a) Dimethyl selenide b. Trimethyl selenide c. Both d. None

215. Rich source of molybdenum is……

a) Maize b. Jowar c. GNC d. Soybean

216. Ill thrift is caused due to deficiency of ……..

a) Copper b. Mo c. Mg d. Selenium

217. Seboric dermatitis is caused by ……

a) B_2 b. B3 c. B5 d. B12

218. Scaly dermatitis is caused by ……..

a) Niacin b. Pantothenic acid c. Biotin d. Thiamine

219. 1^o C temperature increases BMR up……

a) 12 % b. 10 % c. 8 % d. 6 %

220. Pancreatic lipase is also known as …….

a) Trypsin b. Steapsin c. chymotrypsin d. choline

221. Leaves of plants are poor in mineral……

a) P b. Mg c. Fe d. Ca

222. In blood vitamin A is present in the form of……..

a) Retinal b. Retinol c. Retinoic acid d.Pure Vit. A

223. Seed Germs are rich in .....

a) Vit. E b. Vit B_1 c. Vit B_2 d.Both a & b

224. Root crops are rich in …….

a) Lactose b. Pentose c. Sucrose d. Both a & c

225. In ruminants % H_2 intake is recycled ……

a) 12 % b. 10 % c. 1 % d. 5 %

226. Clover disease is caused by……

a) Tannin b. Saponin c. Genistin d. None

227. MPL of urea feeding in ruminants is ……

a) 27 gm/100 kg BW b. 37 gm/100 kg BW

c. 47 gm/100 kg BW d. 57 gm/100 kg BW

228. Yeast used as feed supplement preferably……..

a) Candida histolytica b. Chutamium Spp.

c. Candida lipolytica d. Fusarium Spp.

229. Limiting amino acid in ground nut cake is …….

a) Methionine b. Valine c. Lysine d. All

230. Real balance experiment is coined by……..

a) Weende Experiment b. Boussingault c. Crompton d.None

231. The term Heat Increment is coined by……..

a) Armsby b. Hacker c. Crompton d. Maynard

232. Potassium requirement for growth of lamb is at around…… %

a) 0.1 b. 0.5 c. 1.0 d. 1.5

233. Niacin is a derivative of ……..

a) Histidine b. Purine c. Pyridine d. Pyrimidine

234. Propionic acid is…….. in nature

a) Ketogenic b. Glucogenic c. Amorphous d. Neutral

235. Butyric acid is…… in nature

a) Ketogenic b. Glucogenic c. Both d. None

236. 1 mole of Pyruvate yields…….. ATP

a) 12 b. 14 c. 15 d. 20

237. Ascorbic acid is first invented by…….

a) Maynard b. Loosli c. Szent Gyorgi d. Crompton

238. 1 mole of Palmitate yields……. ATP

a) 12 b. 20 c. 129 d. 30

239. 1 kg of milk contains about…….. gm Calcium

a) 1.2 b. 1.8 c. 2.0 d. 2.4

240. Primary site of selenium absorption in ruminants is…….

a) Colon b. Ilium c. Rumen d. Duodenum

241. Antinutritional factor present in subabhul is ……

a) Caumarin b. Mimosin c. Tannin d. Ricin

242. Salseed cake is exclusively used as……..rich concentrate

a) Protein b. Energy c. Mineral d. None

243. Which is a milk protein……

a) Caesin b. Chymosin c. All d. None

244. Uric acid formation impaired due to the deficiency of…….

a) Molybdenum b. Arginine c. Both d.None

245. …… mineral plays imp role in nucleic acid metabolism

a) Chromium b. Arsenic c. Nickel d. Iron

246. ……. mineral plays imp role in serum cholesterol homeostasis

a) Nickel b. Chromium c. Magnesium d. Calcium

247. ……is a integral part of vitamin B_{12}

a) Copper b. Cobalt c. Iron d. Boron

248. Increase in plasma calcium level leads to ……in calcitonin hormone secretion

a) Decrease b. Remains same c. Increase d. None

249. Carbonaceous foods are rich in……

a) Selenium b. Iron c. Copper d. Gold

250. Productive type of forage contains DCP value more than …….. %

a) 8 b. 7 c. 5 d. 3

251. In calf and monogastric animals the digestion of lipids occurs in…… medium

a) Neutral b. Biphasic c. Triphasic d. Monophasic

252. ……..is a amorphous polymer of phenyl propane derivatives

a) Protein b. Cellulose c. Lignin d. Silica

253. ……. is not a true carbohydrate

a) Glucose b. Hemicellulose c. cellulose d. lignin

254. ……requires for glucose metabolism in ruminants

a) Niacin b. Pyridoxine c. Cynocobalamine d. Pantothenic acid

255. No. of Bacteria present in rumen liquor……..

a) 10^6/ml b. 10^8/ml c. 10^2/ml d. 10^{10} - 10^{11}ml

256. Microbial cell is composed of……. CP.

a) 5-6 % b. 70-80% c. 40-60% d. 10-20%

257. Bile salts are imp for……. of fats

a) Emulsification b. Calcification c. Saponification d. None

258. Carotenides are…….. in nature

a) Phenols b. Terpenes c. Both d.None

259. Hydrogenation of fat increases the chance of hydrolytic…….

a) Turbidity b. Rancidity c. Polarity d. None

260. Mahua seed cake contains…… as antinutritional factor

a) Ricin b. HCN c. Tannin d. Saponin

261. Lead toxicity can be overcome by ……..

a) Phosphorous b. Iron c. Magnesium d. Calcium

262. Vitamin made up of 2 acids……..

a) Thiamine b. Niacin amide c. Folic acid d. Pyridoxine

263. Arachidonic acid can be synthesized from…….

a) Lenolenic acid b. Lenoleic acid c. Oleic acid d. None

264. A leguminous fodder having maximum % of calcium…….

a) Berseem b. Cow Pea c. Lucerne d. Guar

265. Grinding of cereal grains leads to ……. in digestibility.

a) No effect b. Decrease c. Increase d. None

266. Dermatitis, crooked legs, corneal opacity caused by the deficiency of……..

a) Thiamine b. Niacin c. Riboflavin d. Pyridoxin

267. Mid Morrison values were adopted by …….

a) Sen & ray b. Morrison c. Hay standard d. ARC

268. VIVAR method of digestibility is ……. in nature

a) IN VIVO b. IN VITRO c. SEMI IN VIVO d. None

269. Surface area of Dacron bag should be……

a) 250 cm^2 b. 150 cm^2 c. 50 cm^2 d.100 cm^2

270. Acidosis in ruminants is caused by feeding……

a) High Protein diet b. High grain diet c. Hypervitaminosis d. High fibre

271. Hammer mill works on principle of ……..

a) Rotation b. Suction c. Impact grinding d. Mixing

272. Method of protein evaluation based on gross A. A. composition…….

a) Chemical score b. Laboratory method c. Slaughter technique d. none

273. NDF-ADF = ……

a) Cellulose b. Hemicellulose c. Legnin d. All above

274. Primary structure of protein put forward by…….

a) Maynard b. Bose c. Emil Fischer d. Emil Edmond

275. Surface area law was developed by……

a) Rubner b. Atwater c. Morisson d. NRC

276. In sheep…….. is also known as pregnancy toxaemia

a) Sepsis b. Alkalosis c. Acidosis d. Ketosis

277. Productive type of feeding standard is ……..

a) Kellner b. Armsby c. ARC d. All above

278. Max.cf % in BIS grade-I type cattle feed is …….. %

a) 8 b. 10 c. 7 d. 11

279. B.V. of milk protein is .....

a) 1.00 b. 0.95 c. 0.45 d. 0.80

280. Fatty liver condition in poultry caused by……..

a) Excess Fat b. Excess protein

c. Choline deficiency d. Tochopherol deficiency

281. King of fodder crop is …….

a) Berseem b. Jowar c. Maize d. Soybean

282. ……. value of forage is a measure of digestible OM in DM.

a) "C" b. "A" c. "D" d. "B"

283. Following is a Internal marker…….

a) Lignin b. Silica c. Acid insoluble Ash d. All

284. Comparative type of feeding standards…….

a) Scandinavian b. Thaer's standard c. Kellner d. Both a & b

285. Big head disease in horse caused by…….

a) Deficiency of Ca b. Deficiency of P Excess of Ca d. Excess of P

286. As per BIS minimum % of CP in rat diet is ……. %

a) 6 b. 12 c. 18 d. 24

287. Optimum CF level in rabbit diet …… %

a) 12 b. 15 c. 18 d. 21

288. Feeding excessive amount of legume leads to…….. in ruminants

a) Bloat b. Acidosis c. Alkalosis d. All of above

289. Iron metabolism closely depends upon……

a) Mo b. Se c. Cu d. Cr

290. TDN value of oilseed cake ……..

a) 50 b. 75 c. 90 d. may exceed 100

291. All essential fatty acids are…… in nature

a) Saturated b. Unsaturated c. Amphoteric d. Amphipathic

292. ……..contains high % of bypass protein

a) Mustard cake b. Soymeal cake c. GNC d. Coconut cake

293. Consumption of…….. leads to granular ghee production

a) Ground nut cake b. Salseed cake c. cotton seed cake d. Mustard cake

294. "Dissecting aneurysm" in chicken caused by deficiency of……

a) Cu b. Fe c. Se d. Mn

295. Fungal count in rumen is ……../ml of rumen liquor.

a) 10^8-10^9 b. 10^7 c. 10^3-10^5 d. 10^{10}-10^{11}

296. For guinea pig the vitamin c requirement is ……

a) 400 mg/kg DM of diet b. 300 mg/kg DM of diet

c. 100 mg/kg DM of diet d.200 mg/kg DM of diet

297. Tannin binding agents are……

a) PEG b. PVP c. Both d. None

298. Cats are sensitive to deficiency of ……

a) Thiamine b. Lysine c. Arginine d. Methionine

299. Skim milk is rich in……..

a) Ca b. P c. Both a & b d. Mg

300. In clostridia fermented silage lysine converted to ……

a) Methionine b. Cadavarine c. Cystine d. Tryptophan

301. The energy content of large egg of hen is……

a) 86 kcal b. 96 Kcal c. 100 Kcal d. 50 Kcal

302. RUSITEC is a ……

a) Artificial rumen b. Biological rumen

c. Artificial Omasum d. Artificial Reticulum

ANSWER KEY

1	b. Starch	51	b. Feed poor in energy	101	d. Abomasum
2	d. 16.0	52	b. greater MFN	102	a. 13.34 kcal/g
3	b. Glucose	53	d. Arachidonic acid	103	b. 5.5- 6.5
4	b. Phosphorus	54	b. W. C. Rose	104	c. 11
5	c. Dry matter intake	55	c. Isoelectric pH	105	b. Propionate
6	a. Post absorptive state	56	d. Peptide bond	106	a. True
7	a. Linolinic acid	57	a. Increase blood Ca level	107	b. Propionate
8	b. Tocopherol	58	a. 5-8	108	a. Cow
9	b. Riboflavin	59	a. 1	109	b. Decreases
10	d. Bomb calorimeter	60	a. 10^6	110	a. Metabolism trial
11	a. 5-7 %	61	d. B_{12}	111	d. All of the above
12	c. Methionine	62	b. B_2	112	c. Fat
13	d. Biotin	63	c. Cholecalciferol	113	a. Wheat straw
14	b. Available carbohydrate	64	c. Choline	114	c. Fat
15	d. Adult animal	65	b. Copper	115	a. 5-10
16	c. Metabolic body size	66	b. Vitamin B_{12}	116	a. 34.5 and 8
17	a. Redecud cal scours	67	a. Choline	117	c. Lignin
18	c. Parakeratosis	68	a. Selenium	118	b. 15
19	a. Rumen	69	a. Insulin	119	b. Decreases
20	b. Interrelated	70	c. Copper	120	b. Oxidative
21	d. Toxicity od selenium	71	d. B. V.	121	a. 30-100A^o
22	b. Copper	72	d. Small Intestine	122	d. >800A^o
23	b. Oily body fat	73	b. Vitamin E	123	d. All the above
24	b. β type	74	a. Co	124	b. Vitamin E
25	a. Concentrate and roughage	75	a. 9-11mg/100ml	125	b. Non protein nitrogen

26	a. Carbohydrate	76	c. Mg	126	c. Poultry
27	d. All	77	c. Cr	127	a. Protein
28	a. Na	78	d. Vitamin A	128	a. Higher
29	d. Water	79	a. Cu	129	c. Maize
30	a. 10:1	80	a. For life	130	b. 90-230
31	c. I	81	a. Direct fed microbes	131	c. 78%
32	a. F	82	a. 80 and 20%	132	d. Lysine
33	c. Mo	83	a. Amylase	133	c. Alanine and Aspartate
34	a. Bulk	84	c. Rennin	134	c. Both
35	c. Niacin	85	a. Hydrochloric acid	135	d. All the above
36	b. Unhygienic	86	a. 2	136	a. Niacin
37	a. Linoleic acid	87	c. Fat	137	c. Both
38	b. β oxidation	88	a. Inverse relationship	138	b. Cu
39	c. Pantothenic acid	89	b. Protein	139	b. Vitamin B_{12}
40	b. carbohydrate	90	c. Both	140	d. I
41	a. 3-5	91	a. Vitamin B1	141	b. Cellulose
42	b. Antoine Laurent Lavoisier	92	B. 38 ATP	142	a. Cu
43	b. Eggd	93	d. Lignin	143	d. All the above
44	b. 6 Months	94	a. Sucrose	144	c. Both
45	a. Heart	95	b. Per unit metabolic body size	145	a. 1, 25 dihydroxy cholecalciferol
46	a. Acetate	96	b. 122:1, 145:1	146	b. E
47	b. Propionate	97	a. 130:1, 156:1	147	a. B_1
48	c. 30-40	98	c. 145:1	148	d. All the above
49	a. 10, 17, 25	99	a. 70, 18, 12	149	d. 200ppm
50	b. 19	100	d. 50-60, 30-40	150	b. Folic acid
151	a 8-12	201	a 40-50 %	251	b Biphasic
152	a basal metabolism	202	a 1.5 %	252	c Lignin
153	e 0.02gm N /day	203	b 40 %	253	d lignin
154	i 0.36 gm/100 gm DMI	204	a Vit. B6	254	c Cynocobalamine
155	m Listeria Monocytogens	205	a arabinose	255	d 10^{10}- 10^{11}ml
156	a reflectance of light	206	b aspartic acid	256	c 40-60 % CP
157	b 1.2-2% CP	207	d lenolenic acid	257	c Saponification
158	c Dried yeast sludge	208	c thromboplastin	258	b Terpenes
159	a Ca	209	d 8	259	b Rancidity
160	d HCN	210	b calcium	260	c Tannin
161	c oestrogenic factor	211	c K	261	d Calcium
162	c both	212	c Both	262	c Folic caid
163	d vitamin B_{12}	213	b transferrin	263	a Lenolenic acid
164	a 4 BTU	214	c Both	264	a Berseem
165	b 0.83	215	d soybean	265	c Increase

166	c 1986	216	d selenium	266	c Riboflavin
167	b high energy diet	217	a B2	267	a Sen & Ray
168	b 10^7-10^9/ml	218	c Biotin	268	c Semi INVIVO
169	d 25 % CP	219	a 12 %	269	b 150 cm^2
170	b 3.8-4.2	220	b steapsin	270	b high grain diet
171	a trypsin	221	a P	271	c impact grinding
172	c Both	222	b Retinol	272	a chemical score
173	c T L hacker	223	d Both a & b	273	b hemicelluloses
174	a streptomyces lasoliensis	224	d Both a & c	274	c Emil Fischer
175	c Both	225	a 12 %	275	a Rubner
176	b phospholipid lecithin	226	c Genistin	276	d ketosis
177	b Vitamin C	227	a 27 gm/100kg BW	277	d All above
178	a 30	228	c candida lipolytica	278	c 7 %
179	c saponification no.	229	c Lysine	279	b 0.95
180	b free fatty acids	230	b boussingault	280	c choline deficiency
181	c 1:5	231	a armsby	281	a Berseem
182	a 110-220mg/ kg feed	232	b 0.5 %	282	c “D”
183	d 10-12 %	233	c pyridine	283	d All above
184	b 2 wks of age	234	b glucogenic	284	d Both a & b
185	c 75 %	235	a ketogenic	285	d Excess of P
186	b 10-60%	236	c 15 ATP	286	d 24 %
187	b 3 %	237	c Szent Gyorgi	287	b 15 %
188	a anionic form	238	c 129	288	a Bloat
189	c tryptophan	239	a 1.2	289	c Cu
190	a 1.3 %	240	d Duodenum	290	d may exceed 100
191	b 0.2 %	241	b Mimosin	291	b unsaturated
192	a 10-12 microns	242	b energy	292	d coconut cake
193	b 0.22 %	243	a casein	293	c cotton seed cake
194	b arginine	244	c Both	294	a Cu
195	a 0.1 ppm	245	c Nickel	295	c 10^3-10^5
196	b Crompton and Harris	246	b Chromium	296	d 200 mg/kg DM of diet
197	d 76	247	b Cobalt	297	c Both
198	a lecithin	248	c increase	298	c Arginine
199	b 3-3.5 % BW	249	a Selenium	299	c Both a& b
200	b 79 %	250	c 5	300	b Cadavarine
301	a 86 Kcal	302	a Artificial Rumen		

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- Chromosome no's: Cattle-60,Buffalo-50,Sheep-54,goat-60,Horse-64,Donkey-62,Dog-78, Fowl-78, Cat-38, Duck-80, Camel-74, turkey-80, Jap Quail-78, Yak-60, Elephant-56
- As per NBAGR-Breeds:37- cattle, 13- buffalo, 23- goat, 39-sheep, 6- horses& ponies, 8-camel, 2 - pig, 1-donkey and 15-chicken.
- Species Hybridization: Eg:MaleDonkey X FemaleHorse=Mule, MaleHorse X Female Donkey=Hinny
- Per capita availability of milk:263 gms/day, Eggs:51 no's per annum
- Livestock population (FAO, 2012)-Cattle-210.2 mill, Buffalo-111.3 mill, Sheep-73.98 mill, Goat-154 mill, Pig-9.63 mill, Poultry-866 mill.
- Military dairy farms were first to introduce exotic breeds in India.
- Exotic cattle breeds used in India are-Shorthorns, Ayrshire, HF, Jersey, Brown Swiss, Guernsey, Red dane and German Fleckvich (Spotted mountain cattle).
- Deoni is sometimes called as Deccani and Hariana breed is also called Hissar.
- Ayrshire is the most beautiful dairy breed.
- Khillari thrive well under famine conditions and are much valued for this quality-Exported to Sri Lanka for upgrading local cattle for draught purposes.
- Short horned zebu: Hariana, Krishna valley, Mewati, Ongole, Rathi
  Lateral horned: Gir, Dangi, Deoni, Red sindhi, Sahiwal
  Lyre horned: Kankrej, Malvi
  Long horned: Amrit mahal, Hallikar, Kangayam, Khillari
  Small short horned: Punganur etc
- Curled leaf appearance of ear is a characteristic of Gir cattle
- Red sindhi extensively used in India for grading nondescript in Assam, Kerala, Orissa and parts of Tamil nadu.
- Tharparkar is sometimes also called as White sindhi.
- Ongole is also called Nellore breed.
- Kankrej: heaviest of Indian breeds of cattle.
- Vechur-shortest cattle breed, HF-largest dairy breed-highest milk yielder in the world.
- Cattle breeds evolved in India are:-a) ***Taylor breed*** =Evolved near Patna using crosses of *taurus* bulls (Ayrshire bulls from UK) with local cows by Dr. Taylor.

b) ***Jersind*****=**Cross between Red Sindhi 3/8 and Jersey 5/8 for small body size and better adaptability.

c) ***Brown-sind*****=**3/8-5/8 Brown Swiss x Red Sindhi

d)***Karan Swiss*****=**evolved by crossing American Brown Swiss bulls with Sahiwal and Red Sindhi cows at NDRI, Karnal. Brown Swiss inheritance is around 50%. The colour of the breed is red dun. The average age at first calving is 32 months and first lactation yield was 3,564 kg with 4.2-4.4 % fat.

d) ***Karan Fries*****=**Cross between Tharparkar and Holstein Friesian at NDRI, Karnal. The breed has 50% Friesian inheritance. Average yield 3700 kg with 3.8 to 4.0% fat.

e) ***Sunandini*****=** Local non-descript cows were crossed with Brown Swiss bulls. The crosses with 62.5% brown-Swiss inheritance were mated intense followed by selection to synthesize a new breed named Sunandini. Average lactation yield 4351 kg in 305 days.

f) ***Frieswal*****=**Friesian x Sahiwal crossbreds with Friesian inheritance between 3/8 and 5/8 at military farms are being interbred with semen of 5/8 Friesian crossbred bulls into a breed formation programme. Average yield 2729 kg.

- **Cattle breeds evolved abroad are** :-
    - Australian Milking Zebu= Sahiwal/Red sindhi x Jersey
    - Australian Friesian sahiwal=Sahiwal bulls x HF
    - Jamaica Hope=80% Jersey x 15% sahiwal x 5% HF
    - Santa Gertrudis=Brahman x Shorthorn
- Murrah used for grading up of inferior local buffaloes.
- Mehsana, highly valued for ghee production and is intermediate type between Murrah and Surti-popular for urban milk production.
- Nili-Ravi breed is found in the valleys of River Sutlej and River Ravi.
- Godavari is a result of grading up of local buffaloes with Murrah
- Only the murrah group (murrah and Nili-ravi) and Gujarat breeds (Surti, Mehsana, Jaffrabadi) are important from dairying point of view.
- Tightly curled horns-Murrah, Sickle shaped horns-Surti
- Jaffarbadi-heaviest of Indian buffalo breeds.
- Bhadwari-highest milk fat percentage.
- *Arni* is the ancestor of domestic water buffalo.
- *Bos(Bubalus) bubaline*-Indian water buffalo

  Bos mindorensis-dwarf buffalo (3-3 1/2 ft) seen in Philipines- nocturnal, wild animal.

Bos depressicornis-smallest buffalo (2-3 ft), seen in Celebes island of Indonesia-widely hunted by local people.

- River buffalo-chr no is 50, Swamp buffalo-chr no is 48, found in Assam state of our country.
- In Italy recently legislation has been introduced to restrict the use of term "Mozarella "only to those products exclusively made from buffalo milk.
- Buffalo milk is more suitable for the production of tea and coffee whiteners than cow milk.
- Buffalo metabolizes all the carotene into Vitamin A, which is passed on to milk as such.
- Buffalo milk has about 11.42 % higher protein than cow milk.
- Mithun (Gayal)-the domesticated form of gaur. Some consider it as hybrid of gaur and cattle.
- Mithun-also known as Mountain cattle or ceremonial ox.
- Yak-long haired, bushy tailed cattle, domesticated from its wild progenitor, *Bos mutus*.
- Domestic sheep-*Ovis aries*, Domestic goat-*Capra hircus*
- Domestic pig-*Sus domesticus*
- Poultry-The red jungle fowl (*Gallus gallus*) is considered as the progenitor of domestic fowl.
- Single humped camel (*Camelus dromedaries*)-domesticated in Arabia
  Double humped camel (*Camelus bactriansus*)-domesticated in Asia
- Dog-first animal domesticated, Horse-last animal to be domesticated by man.
- Poonch-best for wool production and biggest among the Kashmir breeds.
- Nellore-tallest breed of sheep of India-resembles goat in appearance.
- Jamunapari-Biggest and most majestic goat breed.
- Twinning is common in Bengal goat breed.
- Nubian goat-Jersey of the goat breed. Saanen-Milk queen of goat world.
- Angora goat produces valuable textile fibre known as Mohair-more like sheep in appearance than goat.
- Goat is known as poor man's cow in India and in Europe as Wet nurse of infants.
- Surti-believed that derived from Arabian milch goats, most suited and performed well under stall fed conditions.
- Malbari –also called as Tellichery goats.
- Black Bengal-famous for meat quality and superior quality of skins
- Saanen, Alpine & Nubians were imported to India for crossbreeding of native goats.

- Wild species of sheep (4) in India-The shapoo or urial of ladakh and Punjab,The nyan of Tibet(largest of wild sheep) of Himalayas, Bharal of trans himalayan mountains seen in Tibet, Nepal, Sikkim, Ladakh and Marchopolo sheep.
- Four distinct breeds in dry northern region, adapted to desert conditions
  Long eared sheep-Lohi, Brown headed sheep-Bikaneri,
  Black faced sheep-Marwari, Dark chocolate faced sheep-Kutchi
- Marwari in north-west and Deccani, Bellary in south central peninsula-largest contributors of carpet wool/meat production in country.
- India has imported Soviet merinos, Rambouillets from USA. Rambouillet crosses performed better than Soviet Merino crosses.
- Deccani-found in north of Tungabadra river and Bellary-south of Tungabadra river
- Mecheri sheep skin is of highest quality of sheep breeds in India and is highly valued
- Carpet wool of Kathiawari sheep is called as Joria wool in Europe. Joria is the name of town from which breed is originated.
- Bharat merino-chokla & Nali x Rambouillet & Merino(75 % exotic inheritance)
- Avi vastra- chokla & Nali x Rambouillet & Merino(50 % exotic inheritance)
- Avikalin-Malpura with Rambouillet.
- Avi manas- Malpura & Sonadi with Dorset & Suffolk.
- Indian karakul-Marwari, Malpura & Sonadi with Karakul(75 % exotic inheritance)
- Kashmir merino-Gaddi, Bhakerwal, poonchi x Merino/Rambouillet. (50-75 % exotic inheritance)
- Hissaradale- Bikaneri with Australian Merino(75 % exotic inheritance)
- Broilers are cross between male Cornish and female White Plymoth rock or New Hampshire.
- Guncari-new variety of guinea fowl developed at CARI.
- Swethambari, Kadambari and Chitambari-crossbreds of G.fowl developed at CARI.
- CARI virat-new breed of turkey turkey developed at CARI-have white plumage-meat type.
- Meat type Jap quail crossbred strains developed at CARI-CARI shwetha, CARI uttam, CARI ujwal.
- Egg type Jap quail crossbred strain developed at CARI-CARI pearl.
- **New breeds recognized by NBAGR are** –
  - Kalahandi-Buffalo breed of Odisha.
  - Kosali cattle breed of Chhattisgarh,

- Pulikulam cattle Tamilnadu.
- Malnad Gidda cattle breed from Karnataka.
- Konkan Kanyal goat of Maharasthra.
- Berari goat of Maharashtra.
- Ghoongroo pig of West Bengal.
- Niang Megha is a pig breed from Meghalaya.
- Spiti is donkey of Himachal Pradesh.

- **Contribution of different scientists:**

  Gene(term)-Johannsen; Gene concept-Sutton; Genetics: coined by Bateson; Rediscovery of Mendel's law of segregation-Devries, Correns & Tschormak; Genetic code-Crick; Cell-Robert Hook; Different methods of selection-Hazel & Lush; Reciprocal Recurrent Selection-Comstock, Robinson & Harvey ;Introduction of statistical mathematics in Genetics-Francis Galton; Genetic consequences of various breeding systems-Sewell Wright; Pioneer in Animal Breeding-Robert Bakewell; Correlation between relatives-Ronald A Fisher; Application of population genetics to animal breeding-Lush; Inbreeding coefficient-Malecot G;

- Be thorough with Livestock development programs and rural development programs of the country (Past and present)-like Operation flood, SLBP, ICDP etc, Different five yr plans.
- Be thorough with full forms like FAO, OIE, NDDB, NABARD, NAARM, MANAGE etc…

ANIMAL GENETICS AND BREEDING

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01. Shorthorn breed was evolved by

A) Robert Bakewell B) Bateson C) D.S.Falconer D) Charles Coling

02. Methods of Selection were given by

A) Hazel and Lush B) Sewall and Lush

C) Falconer and Lush D) Sewall and Falconer

03. Generation interval increases in

A) Individual Selection B) Pedigree selection

C) Progeny Selection D) Tandem selection

04. Correlated characters were explained by

A) William Bateson B) Sewall Wright

C) D.S.Falconer D) G.J.Mendel

05. Repeatability of a trait is

A) Lower limit of heritability B) Used to predict MPPA

C) Non genetic factor D) Constant Value

06. Progeny selection is more valuable than mass selection because

A) Generation interval is increased

B) Accuracy of estimating breeding value can be increased

C) It can be used for low repeatable traits

D) Less time consuming

07. Barred condition is seen in

A) Cattle B) Sheep C) Drosophila D) Chickens

08. One of the following is a not a systematic process

A) Selection B) Migration C) Mutation D) Random drift.

09. Which of the following statement is correct? The selection intensity

A) Does not depend upon the heritability value

B) Same for males and females

C) Is more when more animals are selected

D) Depends upon the phenotypic mean

10. Panmixia means

A) Assortive mating B) Rsndom mating C) Non random mating D) Interse mating

11. In Kengurii sheep, the selection differential for 6 months body weight is 2 kg and response to selection is 0.8 kg then the realized heritability for the trait will be

A) 0.4 B) 0.48 C) 0.6 D) 1.0

12. Positive assortive mating results in

A) Increase in Heterozygosity B) Decrease in Heteozygosity

C) Heterozygosity remains same D) Homozygosity remains same

13. The number of sperms resulting from one primary spermatocytes is

A) 6 B) 12 C) 18 D) 4

14. Lemarkism theory was invalidated by

A) Darwin B) Weismann C) Lemark D) Schwann

15. The phenotype is not a good indicator of genotype when heritability of a trait is

A) 1 B) high C) moderate D) zero

16. Bull dog is a lethal condition observed in

A) Dog B) Cattle C) Sheep D) Goat

17. One of the following is not a non sense codon

A) UAG B) UAA C) AUG D) UGA

18. Selection response increases when

A) Heritability decreases B) Additive genetic variance increases

C) Selection differential decreases D) Standard deviation decreases.

19. Selection index is used

A) To improve several characters at a time B) To rank sires

C) To improve one character at a time D) To rank dams

20. The mating of F_1 individuals among them selves is called

A) Interse mating B) Test crossing C) Forward crossing D) Grading up.

21. Chromosome without centromere are called

A) Acrocentric B) Telocentric C) Acentric D) Metacentric

22. The following F_2 phenotypic ratio is an indication of epistasis interaction

A) 6:3:1 B) 6:7 C) 9:6:1 D) 6:3:3:1

23. Coat colour in rabbit is controlled by

A) Multifactors B) Multiple alleles

C) Polygenes D) Cytoplasmic inheritance

24. Hardy Weinberg Equilibrium is tested using

A) ANOVA B) MANOVA C) t test D) Chi Square test

25. Proportionate genetic contribution of a phenotype to the next generation is called

A) Repeatability B) Heritability C) MPPA D) Genetic Correlation

26. Which of the following is not an assumption of H-W Principle?

A) The population is large B) There is random mating

C) No selection, mutation or migration D) No gene interaction.

27. Cross over percentage between two genes on a chromosome will never exceed

A) 25 % B) 50 % C) 75 % D) 100 %

28. The inbreeding coefficient of individual born to non inbred full sibs is

A) 0.125 B) 0.25 C) 0.50 D) 0.625

29. The coefficient of relationship between non inbred full sibs is

A) 0.125 B) 0.25 C) 0.50 D) 0.625

30. The base that that forms double bond with Cytocine is

A) Guanine B) Adenine C) Uracil D) Thymine

31. The bond present between two nucleotides in double helix is

A) Double/ Triple hydrogen bond B) Phosphodiester bond

C) Single hydrogen bond D) Phosphate bond

32. Genetic drift term was coined by

A) William Bateson B) Sewall Wright C) Bridges D) G.J.Mendel

33. Reciprocal Selection was given by

A) Hull B) Comstock and Coworkers

C) Hazel and Smith D) Sneedecor and Cochran

34. Gene mutations

A) Occur at the same rate at all loci B) Are the sources of hereditary variations.

C) Are all recessive D) Are of little importance in evolution of species

35. Hair on ear pinna is an example of

A) Recessive epistasis B) Co dominance C) Holandric genes D) Linkage

36. Chromosome number in Drosophila melanogaster

A) 10 B) 8 C) 6 D) 12

37. X chromosome in sheep is

A) Metacentric B) Sub- metacentric C) Acrocentric D) Telocentric

38. Cross between male horse and female donkey is

A) Mule B) Hinny C) Pien neu D) Jinny

38. Among following breeds, the breed on verge of extinction

A) Amrithmahal B) Krishnavaly C) Hallikar D) Khillar

40. CIB method I stands for

A) Dominant lethal on X chromosome B) Dominant lethal on autosomes

C) Recessive lethal on X chromosome D) Recessive lethal on autosomes

41. In half sib correlation method of estimation of heritability, sire variance represents the following fraction of additive genetic variance

A) 3/4 B) 1/2 C) 1/4 D) 1/8

42. In full sib correlation method of estimation of heritability, sire variance represents the following fraction of additive genetic variance

A) 3/4 B) 1/2 C) 1/4 D) 1/8

43. The sex index of a normal male drosophila fly is

A) 0.67 B) 0.50 C) 1.00 D) 1.50

44. Haploid number of chromosome in dog, chicken and goat is

A) 78, 78, 60 B) 39, 39, 30 C) 78, 74, 64 D) 39, 37, 32

45. The Mendel's laws were rediscovered by

A) De Vries from Holland, Corrons from Germany and Tshermark from Austria

B) De Vries from Germany, Corrons from Holland and Tshermark from Austria

C) De Vries from Austria, Corrons from Germany and Tshermark from Holland

D) De Vries from Holland, Corrons from Austria and Tshermark from Germany

46. The degree of relationship between individual and parent is

A) 0.25 B) 0.50 C) 0.75 D) 0.125

47. Annual genetic gain is inversely proportional to

A) Heritability B) Selection Intensity

c) Phenotypic variance D) Generation Interval

48. S C A means

A) Specific capability of the animal B) Specific Correlation among Animals

C) Specific Combining Ability D) Specific Combining Activity

49. Shire horse breed was founded by

A) Robert Bakewell B) Charles Coling C) Jay L Lush D) Robert Coling

50. Founder of Biometry

A) Robert Bakewell B) Jay L Lush C) Francis Galton D) W Bateson

51. When recessive genotype frequency is 0.04, dominant allele frequency is

A) 0.2 B) 0.8 C) 0.4 D) 0.6

52. Goat breeds found in Temperate Himalayan region

A) Changthangi B) Jamunapari C) Gurez D) Gaddi

53. Cross between Jack and Mare

A) Hinny B) Mule C) Yak D) Mithun

54. The buffalo breed famous for ghee production

A) Murrah B) Surti C) Jaffarabadi D) Nili Ravi

55. The buffalo breed with coiled horn and jet black color is

A) Murrah B) Surti C) Jaffarabadi D) Nili Ravi

56. Leghorn breed of poultry belongs to class

A) Asian B) Mediterranean C) American D) English

57. The heritability of morphological traits ranges from

A) Zero to 0.15 B) 0.30 to 1.00 C) 0.15 to 0.30 D) 1.00 to 2.00

58. The auto sexing in poultry is done using

A) Sex limited traits B) Sex linked traits

C) Sex influenced traits D) polygenic traits

59 Dexter breed of cattle is an example for

A) Homozygous dominant lethal B) Homozygous recessive lethal

C) Dominant lethal D) Balanced lethal

60. With respect to Heteosis, following statement is correct

A) Results due to crossbreeding B) Results due to inbreeding

C) Remain same in F_1 in F_2 and so on D) It is minimum in F_1

61. Integration of chromosome segment to non homologous chromosome is called as

A) Translocation B) Deletion C) Crossing over D) Duplication

62. If there is complete linkage between the genes the percentage of recombinants in test cross is

A) 0 B) 25 C) 50 D) 100

63. Trisomic condition is represented as

A) 2n-1 B) 2n-2 C) 2n+1 D) 2n

64. Female honey bees are

A) Haploid sterile B) Haploid fertile C) Deploid sterile D) Diploid fertile

65. Robertsonian translocation is seen in

A) Cattle B) Sheep C) Goat D) Pig

66. Heterogametic females are seen in

A) Cattle B) Poultry C) Honey bee D) Drosophila

67. Which of the following variance is not a component of genetic variance

A) Additive B) Dominance C) Interaction D) Environmental

68. Which of the following condition is not specific for population in Hardy Weinberg equilibrium

A) Random mating B) Large

C) Absence of migration D) Geographic isolation

69. Name the organelle in the cell with extra nuclear DNA

A) Ribosome B) Mitochondia C) Golgi body D) Lysosome

70. Frieswal is the cross between

A) Brown Swiss and Sahiwal B) H.F. and Sahiwal

C) H.F. and Red Sindhi D) Brown Swiss and Tharparkar

71. Sex influenced genes are located on

A) X chromosome B) Y chromosome

C) X and Y chromosomes D) Autosomes

72. Chegu is a

A) Pashmina sheep of Himalaya B) Pashmina goat of Himalaya

C) Famous mutton sheep D) Famous mutton goat

73. The test cross is a cross between heterozygous and

A) Homozygous dominant B) Homozygous recessive

C) Heterozygous D) Any of the parent

74. Karan fries breed was evolved at

A) N.D.R.I. Karnal B) N.D.R.I. Bangalore

C) I.V.R.I. Izatnagar D) M.D.F Meerut

75. Transformation of one organ in to another is called

A) Transplantation B) Grafting

C) Homeosis D) Homeiostasis

76. The measure of animals expected progeny performance in relation to population mean is called

A) Heritability B) Repeatability

C) Breeding value D) Genetic correlation

77. Condition in human beings where one X chromosome is extra is called

A) Klinefilters syndrome B) Turner syndrome

c) Down syndrome d) Robertsonian syndrome

78. Which of the following statement is not correct with regard to inbreeding depression

a) Occurs due to cross breeding b) Occurs due to in breeding

c) Occurs when heterozygosity increases d) None of the above

79. Creeper condition is the lethal condition seen in

A) Dog B) Cattle C) Buffalo D) Poultry

80. Nucleoside contains

A) Base and Phosphate group B) Base and Sugar

C) Sugar and Phosphate group D) Base, Sugar and Phosphate group.

81. Recurrent Reciprocal Selection was given by

A) Comstock and Coworkers B) Hull

C) Hazel and Smith D) Sneedecor and Cochran

82. The annual genetic gain decreases in

A) Individual Selection B) Pedigree selection

C) Progeny Selection D) Tandem selection

83. Genetics term was coined by

A) Mendel B) Watson & Crick C) W.L.Johannsen D) W. Bateson

84. Y chromosome in Indian cattle is

A) Metacentric B) Sub- metacentric C) Acrocentric D) Telocentric

85. Gir Breed of cattle originated from

A) Gujrat B) Punjab C) Karnataka D) U.P.

86. DNA helical structure was given by

A) Sewall Wright B) William Bateson C) Watson and Crick D) Bakewell

87. With respect to gene mutation, following statement is correct,

A) Occurs at the same rate at all loci B) Are the source of hereditary variation

C) Are all recessive D) Not important in evolution of species

88. The heritability of body confirmation traits ranges from

A) Zero to 0.15 B) 0.15 to 0.30 C) 0.30 to 0.45 D) 0.30 to 1.00

89. Frieswal breed was evolved at

A) NDRI Karnal B) NDRI Bangalore C). IVRI Izatnagar D) M.D.F Meerut

90. MPPA means

A. Maximum Production Performance of Animal

B. Minimum Production Performance of Animal

C. Most Probable Producing Ability

D. Minimum Probable Producing Ability

91. Tallest Breed of Sheep

A. Mandya B. Deccani C. Nellore D. Bellary

92. Genetic Correlation between milk yield and Fat percentage is

A. Negative B. Positive C. 0.35 D. 0.45

93. Individual selection can't be done for the following traits

A. Milk Yield B. Dressing percentage C. Body Weight D. Body Length

94. Genetic gain increases when

A. Decreased Variation in the population B. Selection differential increases

C. Heritability is reduced D. Selection differential decreases

95. The bond present between two adjacent nucleiotides of the same axis is

A) Double hydrogen bond B) Phosphodiester bond

C) Triple hydrogen bond D) Phosphate bond

96. ABO Blood group is controlled by

A) Multifactors B) Multiple alleles

C) Polygenes D) Cytoplasmic inheritance

97. When single gene controls several traits, it is called

A) Pleiotrophy B) Polygenes

C) Multiple alleles D) Combined gene action

98. The following is always true for qualitative trait, it is

A) Measurable. B) Always dominant

C) Controlled by many genes D) None of the above.

99. The following is true for paternal twins. They have

A) Same number of chromosomes. B) Identical genome

C) Same phenotypes D) All of the above

100. A person suffering from klinefelter's syndrome will have the following chromosome number.

A) 43 B) 46 C) 45 D) 47

101. Central Institute of Research on Goat is located at

A) Hissar B) Avikanagar C) Karnal D) Makhdoom

102. Central Institute of Research on Buffaloes is located at

A) Hissar B) Avikanagar C) Karnal D) Makhdoom

103. Central Sheep and Wool Research Institute is located at

A) Hissar B) Avikanagar C) Karnal D) Makhdoom

104. Central Avain Research Institute is located at

A) Hissar B Izatnagar C) Karnal D) Makhdoom

105. National Bureau of Animal Genetic Resources is located at

A) Hissar B) Avikanaga C) Karnal D) Makhdoom

106. Generic name for pea plant is

A) Bos tauraus B) Pisum melanogaster

C) Pisum sativum D) Pea sativum

107. Cattle cloning done for the first time in India at

A) Hissar B) Avikanaga C) Karnal D) Makhdoom

108. The phenotypic ratio in dominant epistasis is

A) 9:3:3:1 B) 12:3:1 C) 15:1 D) 9:3:4

109. The genotypic ratio in dominant epistasis is

A) 9:3:3:1 B) 12:3:1 C) 15:1 D) 1:2:1:2:4:2:1:2:1

110. The phenotypic ratio in duplicate dominant epistasis is

A) 9:3:3:1 B) 12:3:1 C) 15:1 D) 9:3:4

111. The phenotypic ratio in recessive epistasis is

A) 9:3:3:1 B) 12:3:1 C) 15:1 D) 9:3:4

112. The phenotypic ratio in duplicate recessive epistasis is

A) 9:3:3:1 B 12:3:1 C) 9:7 D) 9:3:4

113. Mutagens are the agents that cause

A) Meiosis B) Mitosis C) Mutations D) Crossing Over

114. Mutants are

A) Agents that cause mutation B) The organism where mutation has taken place

C) The organism which is susceptible for mutation D) None of the above

115. Genes for Sex limited traits are present in

A) Only in one sex B) Sex chromosome C) Y chromosome D) Autosomes

116. Following is a sex limited trait

A) Milk yield B) Polled condition

C) Baldness in Human beings D) Barred condition in poultry

117. Milk is standardized for following content

A) Fat B) Protein C) Lactose D) Water

118. Standard lactation length in cow is

A) 240 days B) 305 days C) 365 days D) 200 days

119. The characteristic of good wool is

A) Less medulation percentage. B) More medulation percentage

C) Short staple length D) All of the above

120. In half sib families, between the group variance is due to

A) Genetic cause. B) Phenotypic cause

C) Environmental cause D) None of the above

121. The intraclass coefficient is the ration between

A) With in the group and between the group variance

B) Between the group and with in the group variance

C) Between the group and total phenotypic variance

D) With in the group and total phenotypic variance

122. Out Crossing is mating between the

A) Unrelated animals with in the same breed

B) Unrelated animals of different breeds

C) Related animals with in the same breed

D) None of the above

123. Which of the following statement is correct

A) Top crossing is mating between inbred males and inbred females

B) Top in crossing is mating between inbred males and non inbred females of same bred

C) Top in crossing is mating between inbred males and non inbred females of different bred

D) Top out crossing is mating between inbred males and non inbred females of same bred

124. With regard to line breeding

A) It is a form of inbreeding B) It is form of out breeding

C) Usually males are bred to the common female D) None of the above

125. Boroola gene is known for

A) Fertility in sheep B) Fecundity in sheep

C) Fertility in pig D) Fecundity in pig

126. Co-ancestory method of calculation of coefficient of relationship was given by

A) Sewall Wright B) J.L.Lush C) Malecot D) D.S.Falconer

127. Variance of an individual in variance and covariance chart is

A) One + half of the covariance between its parents

B) One + the covariance between its parents

C) One half of the covariance between its parents

D) It will be always less than one

128. Covariance between X and Y in variance and covariance chart is

A) One + half of the covariance between their parents

B) Half of the sum of the covariance of X with the parents of Y

C) One + Half of the sum of the covariance of X with the parents of Y

D) One + Half of the sum of the covariance of X with the Y

129. Inbreeding coefficient of X is equal to

A) 1 + Var(X) B) 1 - Var(X) C) Var(X) - 1 D) Var(X) X 1

130. As per Gregor J Mendel, the characters are transmitted through

A) Genes B) Seeds C) Factors D) agents

131. Different types of gametes in trihybrid cross is

A) 8 B) 27 C) 81 D) 9

132. Linked genes are present on

A) Different chromosomes B) Same chromosome

C)Non homologous chromosome D)None of the above

133. Annual genetic gain is directly proportional to

A) Heritability B) Selection Intensity

C) Phenotypic variance D) All of the above

134. Prepotency increases due to

A) Inbreeding B) Outbreeding C) Out crossing D) None

135. Popular fine wool breed of sheep from Spain

A) Merino B) Rambooullet C) Southdown D) Lincoln

136. Columbia is a cross between

A) Rambooullet ewe and Lincoln ram B) Rambooullet ram and Lincoln ewe

C) Southdown ewe and Lincoln ram D) Lincoln ewe and Southdown ram

137. Indian cattle breed used in Australian Milking Zebu

A) Sahiwal B) Red Sindhi C) Gir D) Tharparker

138. Number of generations required for animals to have more than 98 % inheritance from exotic breed in grading up.

A) Four B) Five C) Three D) Six

139. Best Mutton breed of goat

A) Gaddi B) Barbari C) Black Bengal D) Mandya

140. Exotic goat from France

A) Saanen B) Alpine C) Anglo Nubian D) Toggenberg

141. Indian breed of pig

A) Yorkshire B) Ankamali C) Landrace D) Mehasana

142. Male line used in Broiler poultry

A) Legghorn B) Cornnish C) Plymoth Rock D) New Hampshire

143. Average dressing percentage in Goat is

A) 30-35 B) 50-55 C) 40-45 D) 60-65

144. For the first time invitro synthesis of DNA was done by

A) Mendel B) Watson & Crick C) Hargobind Khorana D) Muller

145. Chaismata takes place in following stage of meosis

A) Pachytene B) Zygotene C) Diplotene D) Laptotene

146. Genes that cause cancer

A) Mitogenes B) Megagenes C) Oncogenes D) None

147. A person suffering from Turners's syndrome will have the following Chromosome number.

A) 43 B) 46 C) 45 D) 47

148. Turners syndrome mostly occurs in

A) Male only B) Female only C) Both male and female D) None

149. Down Syndrome is

A) Aneuploidy of sex gene B) Euploidy of sex gene

C) Aneuploidy of autosome D) Euploidy of autosome

150. Gene term was coined by

A) Mendel B) Watson & Crick C) W.L.Johannsen D) W. Bateson

ANSWER KEY

1	D	26	D	51	B	76	C	101	D	126	C
2	A	27	B	52	A	77	A	102	A	127	A
3	C	28	B	53	B	78	B	103	B	128	B
4	C	29	C	54	C	79	D	104	B	129	C
5	B	30	A	55	A	80	B	105	C	130	C
6	B	31	B	56	B	81	A	106	C	131	B
7	D	32	B	57	B	82	C	107	C	132	B
8	D	33	A	58	B	83	D	108	B	133	D
9	A	34	B	59	A	84	C	109	D	134	A
10	B	35	C	60	A	85	A	110	C	135	A
11	A	36	B	61	A	86	C	111	D	136	B
12	B	37	C	62	C	87	B	112	C	137	A
13	D	38	B	63	C	88	D	113	C	138	D
14	B	39	B	64	D	89	A	114	B	139	C
15	D	40	C	65	A	90	C	115	D	140	B
16	B	41	C	66	B	91	C	116	A	141	B
17	C	42	B	67	D	92	A	117	A	142	B
18	B	43	B	68	D	93	B	118	B	143	C
19	A	44	B	69	B	94	B	119	A	144	C
20	A	45	A	70	B	95	A	120	A	145	A
21	C	46	B	71	D	96	B	121	B	146	C
22	C	47	D	72	B	97	A	122	A	147	C
23	B	48	C	73	B	98	D	123	B	148	B
24	D	49	A	74	A	99	A	124	A	149	C
25	B	50	C	75	C	100	D	125	B	150	C

ANIMAL GENETICS AND BREEDING

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1) Unit of map distance between two genes is

a) cM b) CM c) M d) M

2) PCR Stands for

a) Polymer chain reaction b) Polymerase chain rotation

c) Polymerase chain reaction d) Name of the above

3) PCR is invented by

a) Karry Mullis 1985 b) Karry Mullis 1984

c) Karry Mullis 1983 d) Karry Mullis 1986

4) Technique of Separation of DNA fragments of different size is called

a) Northern Blotting b) Electrophoresis c) Southern Blotting d) All the above

5) Transfer DNA fragments on to a membrane is called

a) Northern blotting b) Western blotting c) Southern blotting d) All the above

6) Transfer of RNA fragments on to a membrane is called

a) Northern blotting b) Western blotting c) Southern blotting d) None

7) Transfer of Proteins on to a membrane is called

a) Northern blotting b) Western blotting c) Southern blotting d) None

8) c DNA can be used for

a) Expression profiting of genes b) PCR c) Both a & b d) None

9) Suitably labelled Nucleic acid molecule that is used to detect the presence of another nucleic molecule is called

a) Primer b) Probe c) Both a & b d) None

10) Probes are labelled using

a) Radioactive isotopes b) Non radioactive isotopes

c) Both a & b d) None of the above

11) DNA Finger printing is showed by

a) Jeffery *et al.,* 1985 b) Jeffery *et al.,* 1984

c) Jeffrey *et al.,* 1986 d) Jeffery *et al.,* 1983

12) Simple ingenious primer mediated enzymatic method of amplifying short, specific segments of longer DNA or cDNA template is called

a) PCR b) Blotting c) Gel electrophoreses d) All

13) Commonly used enzyme in ordinary PCR

a) *Taq* polymerase b) *Pfu* polymerase c) Both a & b d) None

14) Gene mapping is

a) Method to identify the genes b) Method to nomenclature the gene

c) Method to cleave the genes d) None of the above

15) Procedure of selection of a trait by genetic marker is called

a) Selection b) Marker Assisted Selection (MAS)

c) Both a & b d) None of the above

16) MAS is more efferent for

a) Traits of low h^2 b) Traits expressed late in life

c) Sex limited traits d) All the above

17) Effect of MAS on Generation interval

a) Reduces b) No effect c) Increase d) None

18) DNA Finger printing is

a) Characterization of one or more rare features of an individual's genome by developing DNA fragment band patterns

b) Identity Testing c) DNA profiling d) All the above

19) DNA Fingerprints behave as

a) Dominant b) Recessive c) Co-dominant d) None

20) DNA finger printing band patterns in an individual remain same

a) Irrespective of source of DNA b) From birth to death expect mutation

c) In fresh, frozen or dried samples d) All the above.

21) Transgenic is

a) Animal whose genetic composition is constant

b) Animal whose genetic composition is altered by exogenous DNA

c) Both a & b

d) None of the above

22) Process of production of transgenics is

a) Manipulation b) Transgenesis c) Both a & b d) None

23) Method of transgenic animal production

a) DNA micro injection b) Embryonic stem cell mediated gene transfer

c) Retrovirus mediated gene transfer d) All the above

24) Cloning of which species has been carried out recently in India

a) Monkey b) Chicken c) Cattle d) Buffalo

25) Name of the female calf born to cloned buffalo

a) Garima –I b) Shresht c) Garima –II d) Mahima

26) Cloned buffalo production has been successfully shown by the Indian scientist of

a) IVRI, Izatnagar b) CIRB, Hissar

c) PDC, Meerut d) NDRI, Karnal

27) The technique used to produce the cloned buffalos at NDRI, Karnal

a) Conventional cloning technique only b) Hand guided dowsing technical only

c) Both a & b d) None of the above

28) Enzyme used in the synthesis of cDNA

a) DNA polymerase b) RNA polymerase

c) Reverse transcriptase d) None of the above

29) Enzymes that specifically cleave the DNA molecule at a particular site are called

a) Restriction enzymes b) Ligase Enzymes

c) Polymerase enzyme d) None of the above

30) Retraction enzyme cleave the DNA molecule

a) At Particular site b) Anywhere in the DNA

c) Both a & b d) None of the above

31) Name of the male donned buffalo calf born at NDRI recently on 28th Mar 2013

a) Swarn b) Garima c) Mahima d) None

32) How are normal cells and cancer cells different?

a) Cancer cell undergo mitosis only when they receive specific cellular signals, whereas normal cells undergo mitosis all of the time

b) Cancer cells undergo cell death if they become damaged, whereas normal cells will keep dividing if they are damaged so there are more opportunities to make repairs

c) Cancer cells often have mutations in genes that regulate cell division, whereas normal cells have wild-type genes that regulate cell division

d) Cancer cells usually stay in one place and form a tumour, whereas normal cells frequently travel to many tissues in the body

33) In determination of blood type, you have two parents with the genotypes: Hh I^Ai and Hh ii (hh gives the Bombay phenotype). What are the blood-type phenotypes of parents?

a. A and A b. B and O C B and B d. AB and O

e. O and O f. AB and AB g. A and O h. A and B

34) In shorthorn cattle, the heterozygous condition of the alleles for red coat colour (CR) and white coat colour (CW) is roan coat colour. If two roan cattle are mated, what proportion of the progeny would be white or red (the total non-roan cattle)?

a. O b. 1/16 c. ¼ d. 3/8

e. 1/2 f. ¾ g. 5/8 h. 1.0

35) The histone gene is

a) Exonic b. Intronic c. Split gene d.None

36) Housekeeping gene (constituent gene) are

a. Always operating b. Operates only in presence of an inducer

c. Always functional expect when sup pressed d. Always non functional

37) EcoRI is

a) Restriction enzymes b.Terminal transferase

c) Vector plasmid d.Vector virus

38) Protein synthesis involves the steps of

a) Initiation b. Elongation c. Termination d.All above

39) Plasmids and viruses which are used as carries of foreign DNA are referred as

a) Carriers b. Messengers c. Vectors d.All above

40) When foreign DNA fragment are introduced into appropriate host cells, such cell are said to be transformed and the process is called

a) Translation b. Transduction c. Transformation d.Transcription

41) DNA Polymerase polymerise the nucleotides in which direction

a) 5' – 3' direction b. 3' – 5' direction c. Both above d.None above

42) Which of the following would not be used in preparing recombinant DNA

a) Plasmids b. Phages

c. DNA polymerase – III d.Restriction enzymes

43) RNA controls the synthesis of

a) All hormones b. Chromosomes c. Amino acids d.Enzymes

44) Topoisomerase is involved in

a) Production RNA primer b. Joining of DNA segments

c. Producing of DNA strands d.Separation of DNA strands

45) Leading strand during DNA replication is formed

a) Continuously b. In short segments

c. First formed stepwise d.Ahead of replication

46) Which is the Genetic Engineering

a) Chromosomal alternation b. Cytochromal alternation

c. Alternation in genes d.Test tube baby

47) Which of the following is required for protein synthesis

a) Initiation codon b. Peptidyltransferases c. GTP d.All

48) The DNA Molecule takes a complete turn after every……base pairs

a) Five b. Ten c. Fifteen d.Twenty

49) ……. are enzymes that unwind DNA helices while ……. Break and reseal the strands.

a) Helicase, ligase b. Ligase, topoisomerase

c. Helicase, toposiomerase d.None

50) A nucleotide consists of a ……, a….. and a nitrogen base,

a) Phosphate, ribose b. Phosphate, sugar

c. Phosphate, chloride d. Phosphate, fluorine

ANSWER KEY

No	Ans	No	Ans	No	Ans	No	Ans	No	Ans
1.	A	11.	A	21.	B	31.	A	41.	A
2.	C	12.	A	22.	B	32.	C	42.	C
3.	A	13.	A	23.	D	33.	G	43.	C
4.	B	14.	A	24.	D	34.	D	44.	D
5.	C	15.	B	25.	D	35.	A	45.	A
6.	A	16.	D	26.	D	36.	A	46.	C
7.	B	17.	A	27.	B	37.	A	47.	D
8.	C	18.	D	28.	C	38.	D	48.	B
9.	B	19.	C	29.	A	39.	C	49.	A
10	C	20.	D	30.	A	40.	C	50.	B

BIO-STATISTICS

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1. Correlation is the ratio of :-

   a. Two standard deviations b. Two x^2

   c. Covariance and two standard deviations (both) d.Two regression coefficients.

2. Which of the following are not the diagrams:-

   a. Histogram, frequency polygon b.Square and angular

   c. Cartogram and pictogram d.None of the above

3. Correlation coefficient is obtained from the square root of :-

   a. Two covariance's b.Two regression coefficients

   c. Two standard deviations d.Two Coefficients of variations

4. Two ogives (less than and more than) bisects at :-

   a. Arithmetic mean b.Mode c. Median d.Geometric mean

5. The best measure of dispersion in which all observations participate :-

   a. Mean deviation b.Standard deviation c. Quartile deviation d.All

6. In normal distribution, the area between ±2ó S. D. is :-

   a. 99.73% b.95.45% c. 68.27% d.100%

7. Normal distribution was given by :-

   a. Bernauli b.Fisher c. Student d.A.De Moivre

8. The mean and variance are equal in :-

   a. Binomial distribution b.Normal distribution

   c. Poisson distribution d.None of the above

9. By tossing a coin 100 times, the mean and variance in a Binomial Distribution are

   a. 40,25 b.50,25 c. 50,5 d.50,50

10. Two samples' means are tested by :-

    a. ' F' test b. 'T' test c. 'x^2 ' test d.None above

11. In throwing of two dice simultaneously, the probability of not getting two on the face is :-

    a. 1/36 b.6/36 c. 35/36 d.2/36

12. The sum of the deviations taken from the arithmetic mean is :

    a. 1 b.100 c. 0 d.∞

13. The standard normal variate for mean is :-

    a. X-μ /ó b.X-μ /ó /Sq(n) c. X-μ /$ó^2$/n d. μ- x/ó/n^2

14. The range R can be calculated if which of the following values are known

a. All observation b.Least and greatest terms of observation

c. Both a and b d.Least and median terms of observation

15. Which measure of central tendency divides the population into two equal parts.

a. Mean b.Mode c. Median d.All above

16. To draw histogram we take which values on x-axis and on y-axis .

a. Frequency b.Frequency, attributes

c. Frequency, class interval d.Attributes, frequency

17. Tabulation is the process of arranging the data in an orderly manner into …… and …. Capable of being read into proper directions.

a. Row, columns b.Tables c. Class, tables d.None

18. In a frequency distribution for discrete variables which method is adopted .

a. Exclusive b.Inclusive c. Both above d.None

19. Which measure of dispersion is calculated by only extreme values.

a. Mean deviation b.Variance c. Range d.Stand deviation

20. In a frequency distribution, which are two measures of central tendency do not use extreme value.

a. Mean, mode b.Median, mode c. Mean, range d.Medium, mean

21. If all the values are same the S.D. is :-

a. 1 b.0 c. 100 d. 50

22. In a …… distribution …….. and …… are equal.

a. Poison, mean, mode b.Poison, mean median

c. Normal, mean, median d.None of the above

23. Normal distribution is the limiting from of which distribution [when $n \rightarrow \infty$]

a) Binomial b.Poison c. Both above d.None

24. In simple bar diagram ……. Is kept constant but …… varies.

a) Length, width b.Length, height c. Width, length d. None

25. In analysis of variance by one way classification 4 treatments are tried with 3, 3, 3 & 4 replication then the degrees of freedom for error is

a) 3 b.2 c. 4 d. 9

26. The range of 'F' test statistic value is:

a) 0 to 1 b.0 to ∞ c. $-\infty$ to $+\infty$ d.None

27. In testing of hypothesis we commit which types of error.

a. 1 b. 2 c. 3 d. 4

28. The under root of which coefficients product is correlation coefficient

a. Variation b.Relation c. Regression d. None

29. The sum of deviations taken from median is known as when no sign of deviation is considered

a. Mean deviation b.Absolute deviation c. Relative deviation d. None

30. The range of variance is:

a. 0 to 1 b.0 to 100 c. 0 to ∞ d.-∞ to +∞

31. The measure of central tendency in which all the observations are included is :

a. Arithmetic mean b.Geometric mean c. Harmonic mean d. All

32. In a binomial distribution where p=1/2, q=1/2 and n=6, probability of 2 success is

a. $6C_2$ (1/2)4 (1/2)² b.$6C_4$(1/2)² c. $6C_4$(1/2)5 d. $2C_1$(1/2)6

33. If the correlation coefficient between two variables is – 1, then the variables are :-

a. Uncorrelated b.Positively correlated highly

c. Negatively correlated highly d. Just correlated.

34. The limit of correlation coefficient is :-

a. 0 to 1 b.0 to -1 c. -1 to +1 d. 1 to ∞

35. The range of the regression coefficient is :-

a. 0 to ∞ b.- ∞ to 0 c. -1 to +1 d. -∞ to ∞

36. Which measure of dispersion is free from units:-

a. Range b.Standard deviation

c. Coefficient of variation d. Variance

37. The range of normal distribution is:

a. 0 to ∞ b.-∞ to ∞ c. 0 to 1 d. None

38. The Type-I error can be defined as :-

a. Rej. H0/H1 is true b.Rej. H1/H1 is true

c. Rej. H0/H0 is true d. Rej. H1/H0 is true

39. The degrees of free`dom we refer for a 't' test to test correlation coefficient based on 15 pairs of observations shall be :-

a. 15 b.14 c. 13 d. 30

40. The sum of squared deviation is least when the deviation are taken from :-

a. Arithmetic mean b.Geometric mean c. Median d. Mode

41. Karl Pearson method is used in :-

a.Product- moment correlation b.t- test c. z- test d. f- test

42. Analysis of variance was first developed by :-

a. S.D. Poisson b.James Bernoulli c. R.A. Fisher d. Karl Pearson

43. For construction the frequency polygon from histogram of each interval

a. Lower limits are joined b.Upper limits are joined

c. Middle points are joined d. Cumulative frequencies are joined

44. In a binomial distribution the mean and variance are ;-

a. np, npq b.μ,ó c. m,m d. N,m

45. If (r-1) (c-1) are degree of freedom in a contingency table, the table has …….. rows and ……. Columns.

a. r, c b.2r, 2c c. 3r, 3c d. 4r, 4c

46. In which distribution, mean and variance are same .

a. Poison b.Binomial c. Normal d. All above

47. The significance of two sample means is tested by which test :-

a. Z- test b.t- test c. F- test d.All test

48. The significance of two variances is tested by which test

a. t- test b.F- test c. Chi square test d. z- test

49. The tabular arrangement of data by class together with corresponding class frequency is called as :-

a. Frequency distribution b.Range c. Variation d. None

50. Range can be calculated when ……. and …….. are known

a. Maximum, minimum b.Maximum, mean

c. Mean, mode d. Median, mode

51. If X variable increases with increase of Y, the correlation is

a. Independent b.Dependant c. Both above d. None

52. Normal distribution is limiting from of binomial distribution, when :-

a. n is small, p is large b.n is large, p is large

c. n is very large, p is not very small d. None of the above

53. Relative measure of dispersion is :-

a. Mean deviation b.Standard deviation

c. Both a and b d. Coefficient of variation

54. Occurrence of one event excludes the occurrence of other, event is known as :

a. Dependent b.Independent c. Simple d. All above

55. Rejecting a null hypothesis (Ho) when it true is :

a. Type I error b.Type II error c. Both above d. None

56. The probability that two children born in a family will be females is

a. 1 /4 b.1 /8 c. 1 /2 d. 1/ 12

57. Coefficient of correlation was introduced by :-

a. Karl Pearson b.Karl Correns c. Paterson d. Both a and b

58. Group of individuals under study is called:-

a. Statistic b.Parameter c. Population d. None

59. The range of heritability is:

a. 0 to 2 b.0 to infinitive c. 0 to 1 d.-1 to +1

60. In case of discrete frequency distribution the value for which the frequency is maximum, is known as :-

a. Mode b.Median c. Mean d.None

61. The arithmetic mean of the absolute deviation of each observation from the mean, median or mode is called "-

a. Mean deviation b.Standard deviation c. Variance d. None

62. The frequency distribution can be represented graphically by :-

a. Pie diagram b.Histogram c. Both a and b d. None

63. Mean and variance are ……for Poisson distribution

a. Different b.Same c. Both a and b d. None

64. Binomial distribution tends to Poisson distribution when :-

a. n large, p small b.n small, p large c. n small, p small d. None

65. A die thrown three times, the total number of all possible outcomes will be

a. 18 b.81 c. 216 d. 729

66. Two cards are drawn at a time randomly from a pack of cards, the probability that both cards are black is

a. 2/13 b.26/52 c. 25/102 d.None

67. A herd of cows contains 6 white , 4 red and 9 black cows. If 3 cows are drawn at random, the probability of selecting cow from different colour is

a. 1/51 b.72/323 c. 17/51 d. None

68. The following approach of defining probability relates set theory

a. A priori b.Axiomatic c. Empirical d. Classical

69. If a variable under study is transformed to another variable by changing origin and scale, the correlation coefficient is not affected by change of

a. Origin only b.Scale only c. Origin and scale both d. None

70. The range of $\chi 2$-test statistics is:

a. 0 to 1 b.0 to 100 c. 0 to ∞ d. None

ANSWER KEY

Q. Nos	Ans
1	C
2	A
3	B
4	C
5	B
6	B
7	D
8	C
9	B
10	B
11	C
12	C
13	A
14	B
15	C
16	D
17	A
18	C
19	C
20	B
21	B
22	C
23	A
24	B

Q. Nos	Answers
25	D
26	B
27	B
28	C
29	A
30	C
31	D
32	A
33	C
34	C
35	D
36	B
37	B
38	C
39	C
40	A
41	A
42	C
43	C
44	A
45	A
46	A
47	B
48	B

Q. Nos	Answers
49	A
50	A
51	B
52	C
53	D
54	B
55	A
56	A
57	A
58	C
59	C
60	A
61	A
62	B
63	B
64	A
65	C
66	C
67	B
68	B
69	C
70	C

POULTRY SCIENCE

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1. The parent institute of Avian Research in India situated at Izatnagar is known as

1. CTIPPM
2. CPDO
3. IVRI
4. CARI

2. The total number of CPDO's in India are

1. 3
2. 4
3. 5
4. 6

3. Desi-like chicken evolved by CARI for backyard rearing with Aseel cross is

1. Shyam
2. Upcari
3. Nirbhik
4. HItcari

4. A white plumaged, meat purpose ''Guinea-fowl" evolved by CARI is

1. Guncari-kadambri
2. Gunkari-chitambri
3. Carishweta
4. Guncari-swetambri

5. The popular egg laying duck originated from England is

1. Muscovy
2. Khaki Campbell
3. Pekin
4. Indian Runner

6. The zoological family of Turkey is

1. Melagridiae
2. Phasianidae
3. Anatidae
4. Galliformes

7. The chicken breed in which barring pattern auto-sexing practiced is

1. WLH
2. RIR
3. Sussex
4. Barred plymouth rock

8. The sex ratio in egg type chicken for optimum fertility is

1. 1:10-12
2. 1:8-10
3. 1:15-16
4. 1:1-2

9. Genetically the commercials in chicken are

1. Single hybrid
2. Double hybrids
3. F1 offsprings
4. F3 hybrids

10. The positive heterosis in poultry birds is known as

1. Hybrid
2. Vigour
3. Heterozygosity
4. Nicking

11. R2B vaccine strain used in the disease control

1. MD
2. RD
3. IBD
4. CRD

12. Deworming & debeaking is not used in

1. Layers
2. Broilers
3. Both
4. None of the above

13. Heat stress related vitamin in poultry

1. C
2. D
3. K
4. B12

14. Improper management of litter causes high levels of

1. Methane
2. CO2
3. CO
4. NH3

15. Which of the following is best rearing system for broiler breeder

1. Deep litter
2. Cage system
3. Free range system
4. None of the above

16. The type of economical poultry houses recommended in tropical countries are

1. Controlled environment
2. Non-conventional
3. Open
4. Closed

17. The feeding space allotted for each finishing broiler is

1. 2.5cm
2. $5cm^2$
3. $10cm^2$
4. 10cm

18. The fumigation strength for disinfection of incubation in case of disease emergence is

1. 2x
2. 3x
3. 4x
4. All the three

19. The commonly encountered disease on deep litter rearing of poultry is

1. Coccidiosis
2. Worms
3. Brooder pneumonia
4. All the three

20. For effective cross ventilation, the width of poultry house should not exceed

1. $9m^2$
2. 12m
3. 5m
4. 9m

21. Which of the following disinfectant is more resistant to organic matter

1. Iodophores
2. Quaternaries
3. Coaltar based
4. Phenols

22. The type of roof recommended for a 30ft width poultry house

1. Gable
2. Half monitor

3. Full monitor
4. Shed

23. For commercial broilers the floor space required up to marketing age per bird is

1. 350 cm^2
2. 850 cm^2
3. 1200 cm^2
4. 450 cm^2

24. The best roofing material for poultry houses is

1. Thatched material
2. Tiles
3. Asbestos sheets
4. GI sheets

25. The best litter material for deep litter system of rearing poultry is

1. Chopped paddy straw
2. Saw dust
3. Paddy husk
4. Wood shavings

26. For round the year egg production the best housing system is

1. 1:3
2. 1:2
3. 1:4
4. 1:1

27. For routine fumigation of incubators, the quantity of KMNO4 required for 1000 cubic feet of incubator space is

1. 40 gms
2. 20 gms
3. 80 gms
4. 10 gms

28. At the time of brooding of chicks in deep litter system , the litter material will be spread to a depth of

1. 8”
2. 6”
3. 4”
4. 2”

29. The floor space required for commercial layers under deep litter system from 8 to 16 weeks

1. 3 sq.ft.
2. 1.5 sq.ft.
3. 2 sq.ft.
4. 2.5 sq.ft.

30. The disinfectant commonly used in fumigator is

1. Alcohol
2. Formaldehyde
3. Iodine
4. Chlorines

31. At the ambient temperatures, the method by which the heat lost by birds is more

1. Conduction
2. Radiation
3. Evaporative cooling
4. Conviction

32. The upper lethal temperatures in birds is about

1. 27^oC
2. 37^oC
3. 47^oC
4. 57^oC

33. Which of the following is related with the intensive system of rearing

1. Deep litter
2. Battery cages
3. Californian cages
4. All the above

34. In 1+1+4/5 housing system what is meant by 4/5

1. 4 or 5 layer houses
2. 4 or 5 grower houses
3. 4 or 5 brooder houses
4. None of the above is correct

35. For every 10 layers the number of open nests to be provided is

1. 10
2. 5
3. 4
4. 2

36. The parallel distance between two layer houses must be

1. 1 meter
2. 2 meter
3. 3 meter
4. 10 meter

37. The chlorine content of drinking water at the point of drinking should be around

1. 1 PPM
2. 0.6 PPM
3. 0.3 PPM
4. 0.1 PPM

38. To avoid handling stress in poultry , mass vaccination is done by the route

1. I/M
2. I/N
3. Drinking water
4. S/C

39. In cage rearing the floor space allotted per chick in flat deck cages is

1. 250cm
2. 250 cm^2
3. 300cm^2
4. 337cm^2

40. The side height of a of caged grower house is

1. 3.20 m
2. 2.75 m
3. 2.15 m
4. 2.75 m^2

41. The total number of individual cells in plastic egg trays are

1. 10
2. 20
3. 25
4. 30

42. The MPN (per 100 ml) in drinking water fit for poultry should not exceed

1. 100
2. 40
3. 40000
4. 400

43. Hatching eggs to be stored for seven days are kept at temperature of

1. 14^0C
2. 18.3^0C
3. 21^0C
4. 16^0C

44. The fat content (%) of chicken egg is

1. 12
2. 11

3. 10 4. 11.5

45. The example of Mediterranean class of chicken is

1. White leghorn 2. Minorca
3. Ancona 4. All the three

46. The incubation temperature during the first phase for chicken egg is

1. 46.5 ^{0}C 2. 37.5 ^{0}C
3. 38.5 ^{0}C 4. 33 ^{0}C

47. Phenol is the coltar derivative having the base of

1. Hypochlorous acid 2. Q.A.C.
3. Cresylic acid 4. Carbolic acid

48. The turkey egg weighs (grams)

1. 58 2. 85
3. 72 4. 80

49. The brooding temperature for chicks in the first week is

1. 33 ^{0}C 2. 35 ^{0}C
3. 30.5 ^{0}C 4. 32.5 ^{0}C

50. The incubation period of quail egg (days)

1. 21 2. 18
3. 28 4. 35

51. The brooding temperature in poults during first week is (^{0}c)

a. 37 b. 33 c. 31.5 d. 35

52. The hatching temperature during second phase for chicken egg is (^{0}c)

a. 36 b. 37.7 c. 37 d. 41

53. The dubbing in breeder chicks is done at the age of

a. First week b. 6 weeks c. 3-4 weeks d. 8-9 weeks

54. The mating method preferred for obtaining commercial chicks is

a. Pen mating b. Flock mating c. Random mating d. Alternate males

55. The CO_2 level in incubator should not exceed (%)

a. 1.5 b. 2.0 c. 0.3-0.5 d. 3.0-5.0

56. The sex ratio followed in chicken broiler breeding is

a. 1: 1-2 b. 1:10-12 c. 1:15-16 d. 1:17-20

57. The ANF present in Jowar is

a. Gossypol b. Aflatoxin c. Tannin d.Trypsin inhibitor

58. The housing system used for breeders in poultry is

a. Deep litter b. Free-range c. Cages d. Semi-intensive

59. The litter material used for poultry is

a. Paddy husk b. Saw dust c. Groundnut hulls d. All the three

60. The fertility in males in poultry is affected by

a. Yellow Maize b. Carotene c. Vit. A d. All of the three

61. The depth of air cell in stale egg is

a. 8 mm b. 12 mm c. Both (a & b) d. None

62. The game purpose chicken is

a. Aseel b. Kadaknath c. Javan jungle fowl d. Cochin

63. Chicken belongs to species

a. Platyrhynchos b. Gallus domesticus c. Gallus d. Phasianidae

64. The western region CPDO is located at

a. Bangalore b. Chennai c. Chandigarh d. Mumbai

65. The bacteria causing water borne disease in poultry are

a. Cornybacterium b. Bacillus anthracis c. E. coli d. Klebseilla

66. The average egg size of quail is (g)

a. 50-55 b. 8-10 c. 45-50 d. 72-85

67. The chemicals used for fumigation are

a. Phenyl + Formaline b. $KMNo_4$ + Formaline

c. KMNo4 + Bleaching powder d. Bleaching powder + Aldepol

68. The fertilization of ovum of egg takes place in

a. Isthumus b. Magnum c. Uterus d. Infundibulum

69. In poor layers moulting pattern is

a. Fast b. Early c. Quick d. Late

70. The orientation of poultry house is

a. North-South b. South-West c. East- West d. East-South

71. The comfortable zone of temperature for getting highest performance is (^{0}C)

a. 10-15 b. 16-18 c. 28-30 d. 18.5-21.5

72. The Avian flu is caused by

a. H_5N_1 b. H_2H_5 c. H_2N_2 d. H_1N_1

73. The hatching eggs for 4 days are stored at (^{0}C)

a. 10 b. 18 c. 20 d. 5

74. The poultry vaccines in the refrigerator are stored at the temperature of (^{0}C)

a. Zero b. 15 c. 4 d. - 4

75. The broiler rations of chickens are known as

a. High density b. Low density c. Low energy d. Low proteinous

76. The popular egg type chicken variety (breed) is

a. Sussex b. White leghorn c. R.I.R. d. Orpington

77. The chicken which belong to American class is

a. Brahma b. Sussex c. WLH d. New Hampshire

78. The cheap & best litter material to be used in poultry is

a. Sugarcane bagasse b. Ground hulls c. Rice-bran d. Rice husk

79. The width of poultry house should not exceed (meters)

a. 5.5 b. 9.0 c.15.0 d. 20.0

80. One of the chemical used for fumigation of poultry house is

a. Iodine b. Lysol c.$CuSo_4$ d. Formalin

ANSWER KEY

Q. No	**1**	**2**	**3**	**4**	**5**	**6**	**7**	**8**	**9**	**10**
Ans	4	2	3	4	2	1	4	3	2	4
Q. No	**11**	**12**	**13**	**14**	**15**	**16**	**17**	**18**	**19**	**20**
Ans	2	2	1	4	1	3	4	4	4	4
Q. No	**21**	**22**	**23**	**24**	**25**	**26**	**27**	**28**	**29**	**30**
Ans	4	1	2	3	3	3	2	4	2	2
Q. No	**31**	**32**	**33**	**34**	**35**	**36**	**37**	**38**	**39**	**40**
Ans	3	3	4	1	4	4	2	3	2	2
Q. No	**41**	**42**	**43**	**44**	**45**	**46**	**47**	**48**	**49**	**50**
Ans	4	4	4	2	4	2	4	2	1	2
Q. No	**51**	**52**	**53**	**54**	**55**	**56**	**57**	**58**	**59**	**60**
Ans.	d	a	D	b	c	b	c	a	d	d
Q.No	**61**	**62**	**63**	**64**	**65**	**66**	**67**	**68**	**69**	**70**
Ans.	c	a	B	d	c	b	b	d	b	c
Q.No.	**71**	**72**	**73**	**74**	**75**	**76**	**77**	**78**	**70**	**80**
Ans.	d	a	B	c	a	b	d	d	b	d

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- Handbook of wild animals & livestock management – Jadhav, Baig , Devangare
- Handbook of poultry production & management – Jadhav & Siddiqui 2nd edition
- Scientific Poultry Production : A Unique Encyclopedia- Sreenivasaiah

LIVESTOCK PRODUCTION MANAGEMENT

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1. Sub-Order Perissodactyla refers to

1. Even-toed ungulates
2. Odd-toed ungulates
3. Carnivores
4. Pouched mammals

2. Scientific name of one-humped camel

1. Camelus dromedarius
2. Camelus bactrianus
3. Camelus camelus
4. Camelus humpus

3. Cross between a male horse and female ass is

1. Mule
2. Jennet
3. Honkey
4. Hinny

4. Scientific name of domestic sheep

1. Ovis sheep
2. Capra hircus
3. Ovis ovis
4. Ovis aries

5. Study of animal behaviour is

1. Etymology
2. Behaviourology
3. Ethology
4. Ethos

6. The first farm animal to be domesticated was

1. Cow
2. Horse
3. Pig
4. Sheep

7. Buffalo population in India (as per 2003 Census)

1. 97.9 million
2. 47.5 million
3. 114.5 million
4. 145.2 million

8. India's rank in the world's goat population is

1. 1^{st}
2. 2^{nd}
3. 3^{rd}
4. 4^{th}

9. Over the last decade, India's indigenous cattle population is

1. Increasing
2. Decreasing
3. Constant
4. None of the aove

10. Contribution of livestock sector to India's GDP is about

1. 2.75%
2. 3.75%
3. 4.75%
4. 5.75%

11. Contribution of livestock sector to India's agriculture sector is about

1. 10%
2. 15%
3. 20%
4. 25%

12. Contribution of buffaloes to milk production in India is about

1. 25%
2. 35%
3. 45%
4. 55%

13. The greater contribution to meat production in India is by

1. Poultry
2. Sheep
3. Goat
4. Pig

14. The number of agro-climatic zones of India as per the ICAR are

1. 10
2. 12
3. 15
4. 19

15. Act of mating in sheep

1. Ramming
2. Eweing
3. Tupping
4. Coupling

16. Castrated male pig

1. Steer
2. Gelding
3. Wether
4. Barrow

17. Young female in horse

1. Filly
2. Colt
3. Gilt
4. Geld

18. Smallest piglet in a litter

1. Crit
2. Runt
3. Card
4. All the above

19. A cow apparently always in heat

1. Heater
2. Freemartin
3. Buller
4. None of these

20. Region between the scrotum and the anus is

1. Inguinal
2. Perineal
3. Brisket
4. Croup

21. Junction between the skin and the hoof

1. Fetlock
2. Pastern
3. Coronet
4. Dew claw

22. Milk mirror refers to

1. Mammary veins
2. Mammary arteries

3. Space just ahead of udder
4. Space just above udder between buttocks

23. Anti-cow kicker is fitted onto

1. Achilles tendon
2. Ligamentum nuchae
3. Udder ligaments
4. Suspensory ligaments

24. A length of rope looped into a series of knots which is used for restraining cattle is called

1. Gag
2. Halter
3. Trevis
4. None of the above

25. In Reuff's method, half hitches are placed

1. On the side on which the animal has to be casted
2. Opposite to the side on which the animal has to be casted
3. Both of the above
4. None of the above

26. Aged animals with one or more broken teeth are referred to as

1. Old mouth
2. Broken mouth
3. Full mouth
4. Gummer

27. Age of eruption of permanent corners in sheep

1. 10-20 mths
2. 20-30 mths
3. 30-40 mths
4. 40-50 mths

28. Total permanent teeth in swine

1. 28
2. 32
3. 36
4. 44

29. Ear notching is commonly used to mark

1. Poultry
2. Pigs
3. Sheep
4. Cattle

30. For removal of dried dung etc., brushing is carried out

1. In the same direction as hair flow
2. Against the flow of hair
3. Perpendicular to hair flow
4. None of the above

31. Outdoor exercise with exposure to sunlight is important in providing supplies of

1. Vit. A
2. Vit. B_1
3. Vit. C
4. Vit. D

32. Chemical method of disbudding involves use of

1. Caustic potash
2. Caustic soda
3. Either of the above
4. None of the above

33. Male calves should be castrated at the age of

1. 1 year
2. 2 years
3. 3 years
4. 4 years

34. Sheep and goat can be castrated using

1. Burdizzo castrator
2. Castration knife
3. Elastrator
4. All the above

35. The highest milk producer among the indigenous cow breeds of India is

1. Red Sindhi
2. Gir
3. Sahiwal
4. Deoni

36. One of the best dual-purpose breeds of India is

1. Kangayam
2. Amritmahal
3. Hariana
4. Bachaur

37. Santa Gertrudis breed was evolved in America using

1. Gaolao
2. Deoni
3. Ponwar
4. Ongole

38. Jamaica Hope dairy breed was evolved using

1. HF & Sahiwal
2. Jersey & Sahiwal
3. HF & Kankrej
4. Jersey & Kankrej

39. Buffalo breed with highest milk fat content is

1. Murrah
2. Nagpuri
3. Jaffarabadi
4. Mehsana

40. Buffalo breed with highest milk yield is

1. Murrah
2. Surti
3. Nili-Ravi
4. Mehsana

41. A hilly cattle breed with found in Darjeeling and Sikkim

1. Ponwar
2. Siri
3. Rathi
4. Nagauri

42. The first Military Dairy Farm was started in India at

1. Allahabad
2. Bangalore
3. Nasik
4. Secunderabad

43. Karan Swiss was evolved from

1. Brown Swiss
2. Sahiwal
3. Red Sindhi
4. All the above

44. Karan Fries breed was evolved from

1. Sahiwal
2. Tharparkar
3. Gir
4. Red Sindhi

45. Sunandini breed was evolved from

1. Brown Swiss
2. Sahiwal
3. Tharparkar
4. None of the above

46. The buffalo breed evolved out of crossing Surti and Murrah

1. Jaffarabadi
2. Mehsana
3. Nili Ravi
4. Nagpuri

47. Buffalo breed found in the Nilgiri hills

1. Godavari
2. Tarai
3. Kundi
4. Toda

48. The first Herd Books for Red Sindhi and Sahiwal breed were started in the year

1. 1935
2. 1941
3. 1948
4. 1951

49. Key Village Scheme to produce stud bulls of recognized breeds was initiated in the

1. First Five Year Plan
2. Second Five Year Plan
3. Third Five Year Plan
4. Fourth Five Year Plan

50. Intensive Cattle Development Project was started in the

1. First Five Year Plan
2. Second Five Year Plan
3. Third Five Year Plan
4. Fourth Five Year Plan

51. The region with the largest sheep population in India is

1. North-western, central arid
2. Southern
3. Eastern
4. Northern temperate

52. Nilgiri breed of sheep originated from

1. Coimbatore
2. Tasmanian Merino
3. Cheviot
4. All the above

53. Superior carpet wool breeds are

1. Gaddi
2. Rampur Bushair
3. Poonchi
4. All the above

54. Merino breed of sheep originated in

1. Australia
2. Spain
3. Russia
4. America

55. The important dual-purpose breed imported in India is

1. Merino
2. Suffolk
3. Corriedale
4. Southdown

56. Avikalin breed of sheep was evolved using Rambouillet and

1. Malpura
2. Chokla

3. Nali
4. Sonadi

57. The tallest breed of sheep in India is

1. Deccani
2. Nellore
3. Rampur Bushair
4. Mandya

58. Pashmina fibre is produced from which goat breed

1. Chegu
2. Angora
3. Beetal
4. None of the above

59. AICRP on Pigs was initiated in

1. 1951
2. 1961
3. 1971
4. 1981

60. National Research Centre on Camel is located at

1. Jaipur
2. Hisar
3. Karnal
4. Bikaner

61. An indigenous horse breed are

1. Marwari
2. Kathiawari
3. Spiti
4. All the above

62. Annual yield of wool from German Angora rabbit is

1. 100-200 gms
2. 200-400 gms
3. 400-700 gms
4. 700-1000 gms

63. During the initial period, whole milk is fed to calves at the rate of

1. 5% of body weight
2. 7.5% of body weight
3. 10% of body weight
4. 15% of body weight

64. Gestation period in mares is about

1. 280 days
2. 310 days
3. 340 days
4. 370 days

65. Milking in cattle should be completed within

1. 1-3 minutes
2. 3-5 minutes
3. 5-7 minutes
4. 7-9 minutes

66. Feeding of extra concentrates to ewes prior to and during the breeding season is called

1. Steaming up
2. Flushing
3. Topping up
4. All the above

67. Open area floor space requirement for bulls as per ISI Standards is

1. 4 m^2
2. 8 m^2
3. 12 m^2
4. 16 m^2

68. Covered area floor space requirement for farrowing sows as per ISI Standards is

1. 5-7 m^2
2. 7-9 m^2
3. 9-11 m^2
4. 11-13 m^2

69. Height of inner wall of manger/water trough for sheep & goats as per ISI Standards is

1. 35cm
2. 45cm
3. 55cm
4. 65 cm

70. Standard degree of purity of air for animal houses should not be lower than

1. 93.7%
2. 94.7%
3. 95.7%
4. 96.7%

71. Storage space required for a quintal of loose hay is

1. 0.8 m^2
2. 1.2 m^2
3. 1.6 m^2
4. 2.0 m^2

72. Drinking water requirements of dairy cows and buffaloes under average feeding conditions is

1. 30-35 lits/day
2. 40-45 lits/day
3. 50-55 lits/day
4. 60-65 lits/day

73. Height of guard rails above the floor of the farrowing pen should be

1. 15 cm
2. 25 cm
3. 35 cm
4. 45 cm

74. Teats should be dipped in sanitizing solution

1. Before milking
2. After milking
3. Both of the above
4. None of the above

75. Advantages of quaternary ammonium compounds are

1. Low toxicity
2. Non-corrosive
3. Negligible odour
4. All the above

76. Among the different grades, 'Good' silage will have a pH of

1. 3.7-4.2
2. 4.2-4.5
3. 4.5-4.8
4. More than 4.8

77. A manure pit well suited to Indian conditions is

1. Alnutt's
2. Clinton's
3. Both of the above
4. None of the above

78. In livestock houses, gradient of floors towards the drain should be

1. 1 in 10
2. 1 in 20
3. 1 in 30
4. 1 in 40

79. Normal respiration rate in pigs is

1. 5-10 per minute
2. 10-20 per minute

3. 20-30 per minute
4. 30-40 per minute

80. Normal body temperature of goat is

1. 101^{o}F
2. 102 ^{o}F
3. 103 ^{o}F
4. 104 ^{o}F

81. In a dairy farm, Hohenheim system refers to

1. Milking
2. Breeding
3. Deworming
4. Grazing

82. The main structures that support the udder are

1. Median suspensory ligament
2. Lateral suspensory ligaments
3. Skin
4. All the above

83. Hormone responsible for 'let down' of milk is

1. Growth hormone
2. Parathyroid hormone
3. Adrenal corticoids
4. Oxytocin

84. Amount of milk remaining in the udder after a normal milking is called

1. Residual milk
2. Persistent milk
3. Hormonal milk
4. Fore-milk

85. Dairy cows should be milked

1. Once a day
2. At regular intervals
3. Both of the above
4. None of the above

86. Relation between milk yield and milk fat

1. Directly related
2. Inversely related
3. Not related
4. None of the above

87. Maximum milk fat percentage is found in

1. Fore-milk
2. Milk drawn during middle of milking
3. Last drawn milk
4. Uniform throughout milking

88. As age of the cow increases, milk protein, fat and SNF

1. Increase
2. Decrease
3. Remain constant
4. Are not related

89. Ideal dry period in crossbred cattle is

1. 30 days
2. 45 days
3. 60 days
4. 75 days

90. While milking, it is desirable to first milk

1. Cows producing abnormal milk
2. Cows free of mastitis
3. Cows with previous history of mastitis
4. Heifers free of mastitis

91. The first few jets of milk from each quarter should be

1. Collected in the milking pail
2. Collected in a strip cup
3. Either of the above
4. None of the above

92. Haylage is

1. Low-moisture silage
2. High-moisture silage
3. Low-moisture hay
4. None of the above

93. Lola is the synonym of which Indian cattle breed

1. Sahiwal
2. Red Sindhi
3. Gir
4. Tharparkar

94. In the Indian subcontinent, most buffaloes calve between

1. Apr-May
2. Jun-Aug
3. Sep-Oct
4. Nov-Mar

95. As per time motion studies, what percentage of the labour time is spent behind the dairy cow

1. 25%
2. 50%
3. 60%
4. 75%

96. Methods of drying off dairy cows

1. Incomplete milking
2. Intermittent milking
3. Complete cessation of milking
4. All the above

97. Indigenous swine breed of South India

1. Karaknath
2. Ankamali
3. Deccani
4. Nilgiri

98. Central Institute for Research on Buffaloes is located at

1. Karnal
2. Izatnaar
3. Hisar
4. Bikaner

99. National Research Centre on Yak is located at

1. Guwahati
2. Medziphema
3. Srinagar
4. Dirang

100. Project Directorate on Cattle is located at

1. Karnal
2. Hisar
3. Meerut
4. Izatnagar

ANSWER KEY

Q. No.	**1**	**2**	**3**	**4**	**5**	**6**	**7**	**8**	**9**	**10**
Ans	2	1	2	4	3	4	1	2	2	3
Q. No.	**11**	**12**	**13**	**14**	**15**	**16**	**17**	**18**	**19**	**20**
Ans	4	4	1	3	3	4	1	4	3	2
Q. No.	**21**	**22**	**23**	**24**	**25**	**26**	**27**	**28**	**29**	**30**
Ans	3	4	1	2	1	2	3	4	2	2
Q. No.	**31**	**32**	**33**	**34**	**35**	**36**	**37**	**38**	**39**	**40**
Ans	4	3	1	4	3	3	4	2	3	1
Q. No.	**41**	**42**	**43**	**44**	**45**	**46**	**47**	**48**	**49**	**50**
Ans	2	1	4	2	1	2	4	2	1	3
Q. No.	**51**	**52**	**53**	**54**	**55**	**56**	**57**	**58**	**59**	**60**
Ans	2	4	4	2	3	1	1	1	3	4
Q. No.	**61**	**62**	**63**	**64**	**65**	**66**	**67**	**68**	**69**	**70**
Ans	4	4	1	3	3	2	3	2	1	4
Q. No.	**71**	**72**	**73**	**74**	**75**	**76**	**77**	**78**	**79**	**80**
Ans	3	1	2	2	4	2	1	4	2	3
Q. No.	**81**	**82**	**83**	**84**	**85**	**86**	**87**	**88**	**89**	**90**
Ans	4	4	4	1	2	2	3	2	3	4
Q. No.	**91**	**92**	**93**	**94**	**95**	**96**	**97**	**98**	**99**	**100**
Ans	2	1	1	4	3	4	2	3	4	3

FODDER PRODUCTION AND GRASS LAND MANAGEMENT

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1. Most important cultivated species of Oat is
   a. *Avena sativa* b. *A. byzantine* c. *A. Abyssisica* d. *A. brevis*
2. Variety of oat grown for fodder purpose
   a. Kent b. Algerian c. UPO 50 d. All of these
3. Seed rate required for fodder oat is
   a. 20 kg ha^{-1} b. 50 kg ha^{-1} c. 100 kg ha^{-1} d. 200 kg ha^{-1}
4. Fodder yield generally obtained from one hectare of area in a year of berseem is
   a. 10-20 t ha^{-1} b. 20-30 t ha^{-1} c. 50-60 t ha^{-1} d. 80-100 t ha^{-1}
5. *Rhizobium* species used for treating berseem seeds is
   a. *trofolii* b. *meliloti* c. *japonicum* d. All of these
6. *Seed rate required for berseem fodder is*
   a. 10-15 kg ha^{-1} b. 15-20 kg ha^{-1} c. 25-30 kg ha^{-1} d. 40-50 kg ha^{-1}
7. Best time for sowing of lucerne crop is
   a. September b. October c. November d. December
8. *Rhizobium* species used for treating lucerne seeds is
   a. *trofolii* b. *meliloti* c. *japonicum* d. All of these
9. Paasitic weed associated with lucerne is
   a. Cuscuta b. Orobanche c. Striga d. Loranthus
10. Cuscuta (dodder) in lucerne can be managed by
    a. Removing with host plant and burning b. Removing before seed set
    C. Spraying with crude oil d. All of these
11. Clusterbean is used as
    a. Fodder b. Feed c. Vegetable d. All of these
12. Right stage of harvesting of fodder clusterbean is
    a. Vegetative stage b. Flowering stage
    c. Early pod stage d. Seed maturation stage
13. Napier cannot withstand
    a. Water logging b. Saline soils c. Frost d. All of these
14. Which is the napier variety
    a. Yeshwant b. Gajraj c. Pusa napier – 1 d. All of these
15. Hybrid napier can be intercropped with

a. Cowpea b. Berseem c. Lucerne d. All of these

16. Livestock population of India is

a. 420 million b. 220 million c. 320 million d. 520 million

17. Which of these following is a good indicator of hay

a. Green colour leaves b. Pleasant aroma c. Free from pathogens d. All of these

18. Optimum stage of harvest of forage crops for hay making is

a. Vegetative stage b. Flowering stage c. Grain formation stage d. Maturity

19. Which climatic condition is not suitable for harvest and hay making of forage

a. Bright sunny hours b. High relative humidity c. Both a & b d. Low temperature

20. Preservative used for silage making is

a. Sodium meta bisulphide b. Sulphur dioxide c. Molasses d. All of these

21. Worlds' leading producer of milk is

a. India b. Denmark c. Brazil d. China

22. Optimum stage for harvesting of oats for fodder is

a. Vegetative stage b. Flowering stage c. Dough stage d. Maturity

23. Regrowth of berseem after first harvest is arrested, if temperature goes beyond

a. 24 ^{0}C b. 27 ^{0}C c. 29 ^{0}C d. 32^{0}C

24. Best time of sowing for berseem crop is

a. 1st fortnight of September b. 2nd fortnight of September

c. 1st fortnight of October d. . 2nd fortnight of October

25. "Lucerne Yellow" physiological disorder is due to the deficiency of

a. Boron b. Zinc c. Iron d. Manganese

26. Best suited soil for napier grass is

a. Loamy soil b. Clayey soil c. Sandy soils d. None of these

27. Lucerne fodder crop is originating from

a. Egypt b. India

c. South West Asia d. Rhodesia (Spouth Africa)

28. Scientific name of berseem

a. *Trifolium alexandricum* b. *Avena fatua*

c. *Medicago sativa* *d. Pennisetum purpureum*

29. Following is a tree fodder

a. Neem b. Vagai c. Subabul d. Cassia

30. India has about _____per cent of its total cultivated area under fodder crops

a. 4.4 b. 7.5 c. 10.0 d. 8.5

31. The fodder which has maximum protein content (on dry wt basis)

a. Lucerne b. Cowpea c. Berseem d. Oat

32. Oat a forage crop is grown in (season)

a. *Kharif* b. Rabi c. Summer d. All season

33. Lucerne (*Medicago sativa* L.) is a _____ fodder crop

a. Annual b. Biennial c. Perennial d. All of these

34. Hybrid napier grass is

a. Inter specific hybrid b. Intra specific hybrid c. Hybrid d. None of these

35. The fodder grass tolerate shade is

a. Para grass b. Pennisetum grass c. Guinaea grass d. All of these

36. The fodder grass comes up well in waterlogged condition is

a. Anjan grass b. Rhodes grass c. Para grass d. None

37. King of forage crop

a. Stylosanthes b. Berseem c. Alfa alfa d. Siratro

38. Queen of forage is called to

a. Berseem b. Stylosanthes c. Alfa alfa/Lucerne d. Calopo

39. The nitrogen fixing fodder tree is

a. Buted b. Neem c. Subabul d. Acacia

40. The best way to supply fodder during lean period is

a. Hay b. Soilage c. Silage d. a & c

41. Berseem was introduced in India from _____ in 1904

a. South Africa b. Armenia c. Egypt d. England

42. Ramblei NDRI selection i and Moopa are the varieties of

a. Oat b. Berseem c. Lucerne d. Guar

43. Pusa sadabahar, Pusa Mausmi and Pusa Naubahar are the improved varieties of

a. Oat b. Berseem c. Lucerne d. Guar

44. Napier grass (*Pennisetum purpureum*) was introduced in India in 1912 from

a. Zimbabwe b. South Africa c. Egypt d. Tanzania

45. Toxic substance present in subabul

a. HCN b. Mimosin c. Oxalic acid d. All of the above

46. According to draft report of FYP working plan on GOI there is per cent deficiency of green and dry fodder respectively during 2025

a. 64.9 & 24.9 b. 54.2 & 29.2 c. 48.4 & 40.2 d. 60.2 & 31.4

47. CHO rich fodder suitable for

a. Hay b. Silage c. Both a & b d. None of these

48. Fodder crop tolerance to alkaline soils

a. Maize b. Lucerne c. Berseem d. Both a & c

49. Fodder maize may be intercropped with

a. Lucerne b. Berseem c. Fodder cowpea d. None of these

50. Scientific name of oat is

a. *Medicago sativa* L. b. *Avena sativa*

c. *Trifolium alexandricum* *d. Medicago sativa*

51. Following fodder crop has lower protein content

a. Berseem b. Lucerne c. Cowpea d. Maize

52. For 'very good silage' the pH range should be

a. 3.8-4.2 b. 4.0-4.2 c. 4.2 – 4.5 d. 4.5-4.8

ANSWER KEY

1	a	14	d	27	c	40	d
2	d	15	d	28	a	41	c
3	c	16	d	29	c	42	c
4	d	17	d	30	a	43	d
5	a	18	b	31	a	44	b
6	c	19	c	32	b	45	d
7	b	20	d	33	c	46	a
8	b	21	a	34	a	47	b
9	a	22	c	35	c	48	d
10	d	23	b	36	c	49	c
11	d	24	c	37	b	50	b
12	c	25	a	38	c	51	d
13	d	26	a	39	c	52	a

LIVESTOCK PRODUCTS TECHNOLOGY

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1. Natural casings are prepared from ……..

a. Mucosa b. Submucosa c. Muscular layer d. Serosa

2. Most commonly used barrier bag for vacuum packaging are ……..

a. Polyethylene b. Poly vinylidene c. Polypropylene d. Polyester

3. Frankfuter is a typical example of ……..

a. Uncooked sausage b. Cooked unsmoked sausage

c. Cooked smoked sausage d. Uncooked smoked sausage

4. Cold shortening of muscle occurs when pre-rigor muscle is exposed to a temperature of

a. 5 to –10 ^{o}C b. 0 to 15^{o}C c. -1.5 to –3 ^{o}C d. -20 to –30 ^{o}C

5. Myofibrillar proteins are……..

a. Globular b. Fibrous c. Globular and fibrous d. None

6. Bloom is referred as the property of ……..

a. Fresh carcass b. Frozen carcass c. Cooked meat d. Smoked meat

7. …….. is referred as inspector's lymph node

a. Bronchial b. Mediastinal c. Supra scapular d. Poplitial

8. Livestock unit is ……..

a. 1 adult bovine: 2 pigs: 3 calves: 5 sheep

b. 1 adult bovine: 3 pigs: 5 calves: 10 sheep

c. 1 adult bovine: 3 pigs: 3 calves: 5 sheep

d. 1 adult bovine: 2 pigs: 3 calves: 6 sheep

9. The colour of the pigment nitrosohemochromogen is ……..

a. Brown b. Pink c. Red d. Bright red

10. Casings prepared from small intestine of sheep are called……..

a. Weasand b. Middles c. Bungs d. Rounds

11. Average protein content of carcass meal……..

a. 50% b. 30% c. 70% d. 40%

12. Cytoplasm of muscle fiber is called as……..

a. Protoplasm b. Sarcoplasm c. Sarcomere d.Ground substance

13. Bacterial spoilage in chilled meat is due to bacteria of …….. group

a. Psychrophilic. b. Mesophilic c. Thermophilic d.Microaerophilic

14. Meat pattice are cooked in an oven to an internal temperature of ……..

a. 70 ^{o}C b. 90 ^{o}C c. 60 ^{o}C d. 85 ^{o}C

15. Glycogen content of normal bovine muscle ranges from ……..

a. 0.5-1.3% b. 0.1-1% c. 2 – 3.5 % d. 1- 3 %

16. When meat is frozen slowly the largest crystals are formed ……..

a. Inside muscle fiber b. Between muscles

c. Outside muscle fiber d. Between epi and perimysium

17. The temperature of the retort during canning of meat chunks is ……..

a. 100^{o} C b. 120 ^{o}C c. 150 ^{o}C d. 200 ^{o}C

18. The radiation dose of …….. is sufficient to kill the pathogenic bacteria

a. 0.1 M rad b. 1 M rad c. 1.5 M rad d. 2 M rad

19. Water activity in intermediate moisture foods is maintained between……..

a. 0.6 – 0.85% b. 0.3 – 0.4 % c. 0.8 – 1 % d. 0.2 – 0.5 %

20. Freezing point of meat lies between……..

a. - 1 to –1.5 ^{o}C. b. - 2 to – 0 ^{o}C. c. 0 to – 3 ^{o}C. d. - 1 to 0 ^{o}C

21. Scalding temperature in pigs is about……..

a. 50 - 55 ^{o}C b. 62 - 64 ^{o}C c. 70 - 85 ^{o}C d. 90 ^{o}C

22. Animals should be bled within…….. seconds after electrical stunning to avoid muscle splashing

a. 60 sec b. 30 sec c. 90 sec d. 10 sec

23. The end product of ATP break down responsible for flavour is ……..

a. Hypoxanthine b. Furfural c. Creatinine d. None

24. The characteristic yellow colour of egg yolk is due to ……..

a. Carotene b. Vitamin- A c. Biotin d. Xanthophyll

25. Brucellosis is also known as ……..

a. BVD b. Bangs diseased c. Black disease d. Mucosal disease

26. Since Jan 2001 Britain is facing a severe crisis in beef production due to out break of

a. FMD b. RP c. Mad cow disease d. Brucellosis

27. Strength of pickle solution is measured by……..

a. Barometer b. Torry meter c. Gyrometer d. Salinometer

28. Emulsion is prepared in ……..

a. Tumbler b. Homogenizer c. Flaker d. Bowl chopper

29. The carcinogenic compounds in smoke are……..

a. Benzyl pyrenes b. Carbonyls c. Aldehydes d. PAH

30. Case on systems of flaying/skinning is practiced in……..

a. Cattle b. Buffalo c. Sheep d. Pig

31. Each muscle fiber is covered by……..

a. Perimycium b. Epimysium c. Endomysium d. Fascia.

32. Ham is prepared from ……..

a. Boston butt b. Bellies c. Picnic shoulder d. Thigh & Leg

33. Multiplication of bacteria. is highest during …….. phase of growth.

a. Lag phase b. Log phase

c. Phase of + ve acceleration d. Stationary phase

34. The indicator of fecal contamination is ……..

a. E.coil b. Salmonella. c. S.faecalis d. S. bovis

35. Iodine no. in horse fat is……..

a. 70 - 85 b. 35 – 46 c. 50 – 70 d. 30 - 50

36. Dressed chicken can be stored in a refrigerator at 2^{o} C for ……..

a. 7 days b. 2 days c. 10 days d. 15 days

37. The fat content of chicken egg albumen is ……..

a. 0.2 % b. 10 % c. 15 % d. 20 %

38. Green rot in egg is caused by ……..

a. Pseudomonas b. Staphylococcus c. Serratia d. Cladosporium

39. During ageing the lysosomal enzymes act at the pH……..

a. Below pH 6 b. 7 – 9 c. 10 d. 12

40. The optimum concentration of CO_2 gas in stunning of pigs is ……..

a. 70% b. 20% c. 50% d. 90%

41. Parasites in meat such as Cysticercus bovis and Trichenella spiralis are killed by

a. 0.01 – 0.1 M rad b. 0.5 – 1 M rad c. 1 – 2 M rad d. 10 M rad

42. The voltage during electrical stunning of sheep is usually……..

a. 40 V b. 75 – 80 V c. 90 V d. 120 V

43. Speed of freezing of meat is the time taken to pass from……..

a. 0 to -5^{0} C b. +2 to -2^{0} C c. +1 to -1^{0} C d. +5 to -2^{0} C

44. Antibacterial action of cloves is due to……..

a. Eugenol b. Isothiocyanate c. Carbonic acid d. Phenol

45. Wet dog flavour is typical of ……..

a. AFD meat b. Irradiated meat c. Chilled meat d. Cooked meat

46. The product corned beef, the corn refers to……..

a. Corn flavour b. Granulated. salt c. Na. – Nitrite d. Polyphosphate

47. A minimum of …….. nitrite is necessary to ensure normal colour and flavour in cured meats

a. 20 – 40 ppm b. 100 ppm c. 200 ppm d. 10 ppm

48. Bound water forms about …….. % of the total water content in meat

a. 10 % b. 5 % c. 20 % d. 25 %

49. Ultimate pH of meat protein is……..

a. 4.5 b. 5.5 c. 5 d. 4

50. The moisture content of AFD meat is ……..

a. 2% b. 10% c. 15% d. 20%

51. W.B. Shear force meter measure the strength required in …….. of meat

a. Biting b. Tearing c. Chewing d. Cutting

52. Thaw rigor is caused by the activity of …….. enzyme

a. Lysozyme b. Protease c. ATPase d. Lipase

53 For preparing fermented sausages the …….. culture is used

a. Lactobacillus b. Leuconostock c. Achromobactor d. Psedomonas

54. …….. ions are responsible for muscle contraction

a. Na b. K c. Ca d. SO_4

55. Extraction of fat from the dead carcasses is called as ……..

a. Rendering b. Simmering c. Braising d. Pasteurization

56 Humidity in carcass chilling room should be about ……..

a. 90% b. 40% c. 50% d. 60%

57. Cabbage odour due to methanediol in sliced vacuum packed bacon is due to

a. Pseudomonas b. Proteus inconstans c. Pediococcus d. Micrococcus

58. The black colouration in bone taints is due to production of ……..

a. H_2S gas b. NH_3 c. CO_2 d. Mercaptans

59 Heparin is extracted from……..

a. Lung b. Liver c. Spleen d. Adrenals

60. The process of tanning sheep skin with fish oil is popularly known as ……..

a. Shammoying b. Dying c. Bating d. Desliming

6l. Animal casings are mainly graded based on their……..

a. Length b. Diameter c. Colour d. Moisture content

62. Whiskers on meat surface are caused. by……..

a. Penicillin b. Thamnidium c. Aspergillus d. Achromobactor

63 In meat product preparation maida is used for……..

a. Flavour b. Colour c. Water binding d. Fat binding

64. The famous traditional meat products in Jammu and Kashmir is……..

a. Rapka b. Momo c. Rista d. Kola urandi

65. Measly beef is an another name for ……..

a. Cysticercus tenucollis b. Cysticercus bovis

c. Cysticercus cellusae d. Multiceps multiceps

66. Tyrosine value estimates the extent of …….. breakdown in meat

a. Fatty acids b. Protein c. Carbohydrate d. vitamin

67. Average generation time for bacteria is ……..

a. 20 min b. 10 min c. 30 min d. 40 min

68. Carter's agar is used for cultivation of ……..

a. E.coli b. Fungus c. Proteus d. Stapohylococcus

69. …….. gives acid fast reaction on Ziehl Neelsen's staining.

a. Closrtidium b. Salmonella. c. Campylobactor d. Tuberculosis

70. Example of spirochets is……..

a. Leptospira. b. Vibrio c. Mycoplasma. d. Klebsiella.

71. …….. is the most tender cut in beef carcass.

a. Rump b. Short plate c. Chuck and blade d. Sirloin

72. Colour of rabbit meat is ……..

a. Pale brown b. Red c. Cherry red d. Pink

73. Main objective of adding salt during meat emulsion preparation is……..

a. to extract myofibrillar proteins b. antioxidant

c. antimicrobial d. flavour

74 . …….. is the GRAS chemical additive

a. Citric acid b. $KMnO_4$

c. Sodium hypochlorite d. Benzylpyrines

75. Technical fat is used in manufacture of ……..

a. Soap b. Fat liquor c. Lubricant d. Edible oils

76. Fatty acid composition of oils can be estimated. by ……..

a. TLC. b. GLC. c. Refractometer d. AAS

77. Average dressing % in Indian goats is about……..

a. 35-50% b. 55% c. Above 70% d. 60%

78. …….. instrument is used to measure the smoke density in smoke houses

a. Electric eye b. Plannimeter c. Ameter d. Densitometeric scan

79. Alarm water content in fat free dehydrated meats is……..

a. 15% b. 30% c. 40% d. 50%

80. Ruffle fat is a fat around ……..

a. Kidney b. Mesentery c. Thoracic region d. Rectum

81. Haugh index is used to determine the internal quality of……..

a. Milk b. Meat c. Paneer d. Egg

82. …….. is initiated the concept of canning of foods

a. B. Franklin b. R.A. Lawrie c. N. Appert d. R. Hamm

83. The food poisoning caused by Bacillus cereus is referred as ……..

a. Infection b. Infestation c. Intoxication d. Ingestion

84. The quality standards for foods all over the world are monitored as per……..

a. ISO b. APEDA. c. OIE d. FAO

85. Yellow fever is an example of …….. zoonoses

a. Direct zoonoses b. Meta zoonoses c. Cyclo zoonoses d. Sapro zoonoses

86. An association between two organism in which both are benefited. is ……..

a. Symbiosis b. Synnenecrotic c. Antagonism d. Mutualistic

87. Mycobacterium piscium causes T.B.in……..

a. Cattle b. Sheep c. Frog d. Birds

88. Anthrax is also known as ……..

a. Wool sorters disease b. Struck c. Weil's disease d. Undulant fever

89. Clenbutarol is an……..

a. Growth promoter b. Antiseptic c. Antibiotic d. Lipolytic agent

90. …….. are the principal host for Leptospirosis

a. Cattle b. Man c. Lizard. d. Rodent

91. All organophosphorous compounds produce …….. residue in tissues

a. Little or no b. Moderate c. High d. Heavy

92. …….. is taken for toxic residue analysis

a. Liver b. Heart c. Spleen d. Intestine

93. The method of packing dressed broiler chicken is known as ……..

a. Trussing b. Wrapping c. Tetrapacking d. None

94. Scalding temperature for turkey is usually ……..

a. 60^{o} C for 60 sec b. 53^{o} C for 120 sec

c. 60^{o} C for 120 sec d. 93^{o} C for 5 sec

95. Meat bone ratio in dressed broiler is approximately……..

a. 4:1 b. 2:1 c. 3:1 d. 5:1

96. National Research Center on meat is situated at ……..

a. Bombay b. Calcutta c. Hyderabad d. Delhi

97. In India, processed meat products from chicken are manufactured by……..

a. Lipton b. Venkys c. Hindustan liver d. Griffon

98. Meat analogues are prepared from……..

a. Pork b. Vegetable proteins c. Beef d. Mutton

99. The enzyme present in chalyza of chicken gee which has antibacterial effect is

a. Lysozyme b. Amylase c. Protease d. Pectinase

100. Generalizaed sarcocystosis in buffalo meat leads to …….. decision

a. Partial condemnation b. Total condemnation

c. Passed d. passed with caution of cooking

101. The following cut up part is biggest among wholesale cuts of Beef carcass

a) Chuck b) Brisket c) Plate d) Rump.

102. The remaining lower two third of the shoulder in pork carcass is called

a) Picnic shoulder b) Loin c) Jowl d) None.

103. Bone % in dressed carcass is highest in

a) Sheep b) Beef c) Pork d) None.

104. Dressing % is highest in

a) Pig b) Beef c) Sheep d) None.

105. Rapid chilling of carcass results in

a) Cold shortening b) Bone taint c) Mold growth d) None.

106. Side bellies of pigs that are cured are called

a) Bacon b) Ham c) Both d) None

107. Methods used for assessing WHC of meat are

a) Filter press method b) Miller centrifuge method

c) Both d) None

108. The ERV filtrate decreases in

a) Spoiled meat b) Good quality meat c) Both d) None

109. Scalding temperature for culled birds is

a) 60^0c b) 55^0c c) Both d) None

110. Following meat character are considered while grading dressed chicken

a) Confirmation b) Fleshing c) Finish d) All

111. The ERV filtrate increases in

a) Spoiled meat b) Good quality meat c) Both d) None

112. Good quality meat will have pH

a) 7.0 b) 6.4 c) 5.5 d) None

113. Vit-B-$_{12}$ is recovered from

a) Lung b) Liver c) Kidney d) None

114. Entry into meat plant is

a) Unclean into clean section b) Clean into unclean section

c) Both d) None

115. Giblets of poultry carcass are

a) Heart b) Liver c) Gizzard d) All

116. Idealistic (ICMR) Per capita consumption of meat &egg should be

a) 34gms/day/person& half egg/day/person b) 12Kgs meat/annum&180eggs /annum

c) Either of the above d) None

117. Which of the following meat gives ammonical odour

a) Chevon b) Mutton c)Carabeef d) Pork

118. Which of the following meat is costliest in Indian Market

a) Mutton b) Chevon c) Pork d) Chicken

119. Low ultimate pH of meat is observed in the following condition.

a) PSE b)DFD c)Glazy meat d) Cold shortened meat.

120. Following is a spicy sausage prepared in weasand

a) Bologna b) Hotdog c) Luncheon meat d) None

121. The capacity of meat to retain its water during the application of physical forces is known as

a) Water holding capacity b) ERV c) Tyrosine value d) None

122. Process of obtaining commercial sterility in meat by using ionizing radiation is called

a) Radurization b) Radappertization c) Both d) None

123. Following are called as regulatory protein in the meat

a) Troponin b) Tropomyosin c) Both a & b d) None

124. Following pigment is responsible for meat color

a) Mb b) Hb c) Both d) None

125. Papaya fruits are generally added while preparing Biriyani to increase

a) WHC b) Tenderness c) Flavour d) None.

126. Meat inspector basically should be a

a) Nutritionist b)Veterinarian c)Doctor d) Food hygienist.

127. The protein content of an average weight egg is

a) 7gm b) 4gm c) 10gm d) 2gm.

128. Bacterial spoilage in canned meat is observed by

a) Swelling of the can b) Denting of the sides of the can

c) Both d) None.

129. Good drain of blood is observed in the following method of ritual slaughter.

a) Halal method b) Kosher method

c) Jatka method of slaughter d) None

130. The following lysosome like enzyme released during ageing of meat is

a) Catalases b) Cathepsins c) Aldolases d) None

131. Casings from a part of large intestines of pigs is known as

a) Maws b) Chitterlings c) Middles d) None.

132. Skin obtained from fully grown large animals is known as

a) Hide b) Lard c) Tallow d) All

133. Catgut used in surgical operations is prepared from

a) Weasand b) Reticulum c) Smallintestine d) All

134. NDDB Headquarters is situated at

a) Karnal b) Makdhum c) Anand d) Hissar

135. Milk is poor source of

a) Vit.C b) Iron c) Vit. E d) All.

136. The following indigenous product has AGMARK label.

a) Butter b) Lassi c) Dahi d) None

137. The fat % of toned milk is

a) 1.5% b) 3.0 c) 5.0% d) None

138. The following is system of cleaning of milk plant that does not require dismantling of the equipments.

a) CIP cleaning b) CCS c) Both d) None

139. The following oil is used as coating material in preservation of eggs

a) Mineral oil b) Neem oil c) Both d) None

140. Cold sterilization in meat preservation refers to

a) Radiation b) Freezing c) Canning d) None

141. The following compound is formed in cured meats when nitrite is added in excess

a) Nitrosamine b) Phenol c) Resins d) None

142. The antibacterial compound formed during smoking of meat is

a) Formaldehyde b) Phenol c) Both d) None

143. After heating pasteurized milk usually contains organisms

a)Themophilic b)Thermoduric

c) Osmophilic d) Cycrothrophic

144. The temperature for UHT is

a) 135-150^{O}C b) 160 ^{O}C c) 155 ^{O}C d) 130 ^{O}C

145. The most variable constituent of milk is

a) Fat b) Casein c) Both d) None

146. Natural acidity of milk is due to

a) Citrates b) Phosphates c) Both d) None

147. The marker enzyme for pasteurization is

a) Phosphatase b) Lipase c) Both d) None

148. Primary function of packaging is

a) Protection of product b) Impart aesthetic look c) Both d) None

149. Pre stratification method is used for preparing milk product

a) Ghee b) Butter c) Cream d) Khoa

150. Pasteurization that is adopted in most of the dairy plant is

a) HTST method b) LTLT c) Vacreation d) None.

151. Cream for butter making should have a minimum fat % of

a) 40 b) 20 c) 15 d) 10

152. According to PFA, the butter should have a minimum fat content of

a) 16% b) 20% c) 18% d) 25%

153. Milk is a type of emulsion

a) Water in oil b) Oil in water c) Oil in oil d) None.

154. The main causative organisms for post pasteurization contamination in milk is

a) Colifoms b) Bacillus c) Both d) None

155. The starter culture Used for the manufacture of yoghurt contains

a) Streptococcus bacillus b) Streptococcus thermophillus

c) Lactobacillus bulgaricus d) b & c

156. The Index organism taken for pasteurization of milk is

a) Coxiella burnettii b)Mycobacterium Paratuberculosis

c) Mycobacterium tuberculosis d) None

157. The fat% and SNF % in standardized milk is

a) 4.5&8.5 b) 6&9.5 c) 3& 8.5 d) None

158. The fat % in double toned milk is

a) 3 b) 1.5 c) 0.5 d) None

159. The recommended water requirement (EEC Directives) for a bovine in a abattoir is

a. 100 litres/day b. 45 litres/day

c. 272 litres/day d. 454 litres/day

160. The intensity of light generally recommended at all inspection points in a abattoir should be not less than

a. 220 lux b. 540 lux c. 440 lux d. 110 lux

161. The temperature of water for scalding of pigs should be

a. 40-50^{0}C b. 82-84^{0}C c. 52-54^{0}C d. 62-64^{0}C

162. The test for detection of efficiency of bleeding is

a. Haemoglobin test b. bilirubin test c. malachite green test d. blood test

163. The recommended strength of chlorine for carcass washing is

a. 130-200ppm b. 30-100ppm c. 250-300ppm d. 500-530 ppm

164. The BOD of domestic sewage is 250-300 mg/litre whereas BOD of abattoir effluent is..... mg/ litre.

a. 600-1300 b. 500-1000 c. 1500-2000 d. 5000-5500

165. Skin of unborn calf is designated as

a. Calf skin b. Slunk skin c. Kip skin d. Green skin

166. The fat surrounding the rumen and or the stomach is called as

a. Suet b. Cutting fat c. channel fat d. Caul fat

167. In a wet rendering the raw material is cooked at …….. psi for 4-8 hours.

a. 200 b. 40 c. 120 d. 10

168. The average conversion of raw material to dry meal in dry rendering is in the ratio of

a. 5:1 b. 4:1 c. 2:1 d. 3:1

169. High ultimate pH of meat is observed in the following condition.

a. PSE b. DFD c. Glazy meat d. Cold meat.

170. Following is a emulsion type sausage prepared from the meat of old animals.

a. Bologna b. Hotdog c. Luncheon meat d. None

Suggested Reading:

1. Meat Hygiene - Gracey et al
2. Principles of meat science -John. C. Forrest
3. Modern abattoir practices & animal byproducts technology - B.D.sharma.
4. Outlines of meat science and p technology-B.D. Sharma and K Sharma
5. Meat & meat products technology-B.D. Sharma.
6. Outlines of dairy technology- Sukumar de

ANSWER KEY

Q. N	Ans	Q. No.	Ans	Q. No.	Ans.	Q. No.	Ans	Q. No.	Ans.	Q. No.	Ans
1	b	31	c	61	B	91	a	121	a	151	a
2	b	32	d	62	C	92	a	122	b	152	d
3	b	33	b	63	C	93	a	123	c	153	b
4	b	34	a	64	C	94	d	124	c	154	a
5	c	35	a	65	B	95	a	125	b	155	c
6	a	36	a	66	B	96	c	126	b	156	a
7	a	37	a	67	A	97	b	127	a	157	a
8	a	38	a	68	D	98	b	128	c	158	b
9	a	39	a	69	D	99	a	129	a	159	c
10	d	40	a	70	A	100	b	130	b	160	b
11	a	41	a	71	D	101	a	131	a	161	d
12	b	42	b	72	A	102	a	132	a	162	c
13	a	43	a	73	A	103	a	133	c	163	b
14	d	44	a	74	A	104	a	134	c	164	c
15	a	45	b	75	A	105	a	135	d	165	b
16	a	46	b	76	B	106	a	136	a	166	d
17	b	47	a	77	A	107	c	137	b	167	b
18	a	48	b	78	A	108	a	138	a	168	d
19	a	49	b	79	A	109	a	139	a	169	b
20	a	50	a	80	A	110	d	140	a	170	a
21	a	51	d	81	D	111	b	141	a		
22	b	52	c	82	C	112	c	142	c		
23	a	53	a	83	A	113	b	143	b		
24	a	54	c	84	A	114	b	144	a		
25	b	55	a	85	B	115	d	145	a		
26	a	56	a	86	D	116	c	146	c		
27	d	57	b	87	C	117	b	147	a		
28	d	58	a	88	A	118	c	148	a		
29	d	59	a	89	A	119	a	149	a		
30	c	60	a	90	d	120	b	150	a		

FACTS/STATISTICS ABOUT LIVESTOCK SECTOR

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- India's livestock sector is one of the largest in the world. It has 56.7% of world's buffaloes, 12.5% cattle, 20.4% small ruminants, 2.4% camel, 1.4% equine, 1.5% pigs and 3.1% poultry. In 2010-11, livestock generated outputs worth Rs 2075 billion (at 2004-05 prices) which comprised 4% of the GDP and 26% of the agricultural GDP. The total output worth was higher than the value of food grains.
- Milk production increased from around 20 million tons in 1960s to 115 million tons in 2010-11. It grew at an annual rate of 4.4% during 1990s and 3.8% during 2000s. Although per capita availability of milk has increased from 128 g/day in 1980-81 to 267 g/day in 2010-11,it is far below the requirement of 280 g.
- Meat production from the recognized sources is estimated to be 3.96 MT and has increased at 4.1% annually during the last 5 years. Buffalo meat has grown at around 8% annually. Cattle and buffalo, sheep and goat, pigs, and poultry contribute 55.0%, 17.1%, 11.4% and 16.3%, respectively to total meat production.
- Livestock production activities are largely in the hands of women. The rapidly increasing demand for livestock products creates opportunities for their empowerment. Harnessing these, however, would require addressing constraints that women face. Appropriate policy and institutional arrangements such as establishment of "Women Livestock Producer Associations" would facilitate availing credit, insurance and other inputs and marketing services. Training women would reduce drudgery to women and improve animal productivity and enhance their economic returns.
- The dairy cooperative network in the country includes 254 cooperative milk processing units, 177 milk unions covering 346 districts and over 1, 33,000 village-level societies with a total membership of nearly 14 million farmers. Besides handling liquid milk, these plants manufacture value-added products.
- Livestock has been an important source of livelihood for small farmers. They contributed about 16% to their income, more so in states like Gujarat (24.4%), Haryana (24.2%), Punjab (20.2%) and Bihar (18.7%).
- Improving productivity in a huge population of low-producing animals is one of the major challenges. The average annual milk yield of Indian cattle is 1172 kg which is only about 50% of the global average 4, and much less than in New Zealand (3343 kg),

Australia (5600 kg), UK (7101 kg), US (9332 kg) and Israel (10214 kg). Likewise the meat yield of most species is 20-60% lower than the world average.

- The share of agricultural sector in GDP declined from 34% in 1981-82 to 15% in 2010-11. The share of livestock in GDP also declined but not as steep as the share of agricultural sector. It remained between 5-6% until 2000-01 and then gradually declined to 3.9% in 2010-11. Nonetheless, the share of livestock in the agricultural GDP improved consistently from 15% in 1981-82 to 26% in 2010-11.
- India has huge population of different species of livestock. In 2007 there were 199 million cattle, 105 million buffaloes, 72 million sheep, 141 million goats, 11 million pigs and 649 million poultry birds.
- Meat production from registered slaughter houses increased from 3.6 million tons in 1992-93 to 4.5 million tons in 2010-11 at an annual rate of around 1%.
- Wool production in the country, after reaching a peak of 51 million kg in 2002-03, declined to 43 million kg in 2010-11.
- India ranks 3rd in sheep population, next to China and Australia and is placed at the 7th position among the top 10 countries of the world in terms of mutton and wool production.
- India has 13.84 million pigs and the North Eastern Region (NER) has the highest concentration. In spite of sizeable population, the local pigs are not able to meet the pork demand of North-Eastern states. The region, therefore, imports large number of pigs from other major pig producing states including Andhra Pradesh, Uttar Pradesh, Bihar and West Bengal to meet the pork demand.
- India has emerged on the world poultry map as the 3rd largest egg (56 billion eggs) and 5th largest poultry meat (2.6 million tons) producer. Total chicken population has registered an annual growth of 7.3% in the last decade. While farm chicken grew at the rate of 12.4%, *desi* chicken showed much lower growth rate of about 2%. Other poultry species showed reduction of 2.3 % per annum between 2003 and 2007.
- The potential of poultry sector in employment generation and enhancing rural incomes is well-recognized. Over 5 million people are directly or indirectly engaged in poultry sector, apart from numerous small poultry keepers in rural and tribal areas of the country.
- Presently, there are 135 registered breeds of livestock and poultry in India which includes 34 breeds of cattle, 12 of buffalo, 39 of sheep, 21 of goats, 6 of horse and ponies, 8 of camel and 15 of chicken, besides populations/breeds of other species like pigs, mules, donkeys, yaks, mithuns, ducks, quails etc.
- Meat production from the recognized sources is estimated to be 3.96 MT (DAHD, 2010). However, meat production which is quoted as 6.3 MT at various forums has increased at

the rate of 4.1% annually during the last 5 years. Cattle and buffalo, sheep and goat, pigs, poultry contribute 55.0%, 17.1%, 11.4% and 16.3%, respectively to total meat production.

- Buffaloes outnumber cattle in Uttar Pradesh, Andhra Pradesh, Rajasthan, Gujarat, Punjab and Haryana which account for two-third of country's total buffaloes as against 30% of the total cattle. The females account for more than 81% of the total buffalo population.
- Highest Average milk production per day in India (As per 2008-09)
  I. Punjab II. Haryana
- Highest milk producing state in India(As per 2008-09)
  I. Uttar Pradesh (Higher Population of livestock) II. Andhra Pradesh
  III. Rajastan IV. Punjab
- Highest Egg producing state in India (As per 2008-09)
  I. Andhra Pradesh II. Tamil Nadu III. Haryana
- Highest Meat producing state in India (As per 2008-09)
  I. Andhra Pradesh II. Maharashtra III. Uttar Pradesh
- Per capita availability of Milk during 2007-08 in India is 252 Grams per day.
- Per capita availability of eggs during 2007-08 in India is 47 eggs per year.

Trend in livestock population (million)

Species	**1997**	**2003**	**2007**
Total cattle	198.88	185.18	199.08
Total buffalo	89.92	97.92	105.34
Sheep	57.49	61.47	71.56
Goat	122.72	124.36	140.54
Pig	13.29	13.52	11.13
Poultry	347.61	489.01	648.88

WORLD ESTIMATES OF MILK PRODUCTION (2008)

Total Milk Production- 693.71 Mil.MTS **No. of countries producing milk- 196**		
Country	Production (MTS)	Position in World
India	109000000	1
U.S.A	86178896	2
China	40130066	3
India Contribution	**15.71 %**	

Total Cow Milk – 578.45 Million MTS **No. of countries producing cow milk- 194**		
Country	Production (MTS)	Position in World
U.S.A	86178896	1
India	44100000	2
China	35853665	3
India Contribution	**7.62 %**	

Buffalo Milk Production- 89.28 Mil.MTS **No. of countries producing milk- 21**		
Country	Production (MTS)	Position in World
India	60900000	1
Pakistan	20985000	2
China	2900000	3
India Contribution	**68.21%**	

Sheep Milk – 9.13 Million MTS **No. of countries producing sheep milk- 75**		
Country	Production (MTS)	Position in World
China	1096000	1
Syrian Arab Rep.	873673	2
Greece	785000	3
India Contribution	**0.00 %**	

Total Goat Milk – 15.22 Mil.MTS **Countries producing Goat milk- 103**		
Country	Production (MTS)	Position in World
India	4000000	1
angladesh	2168000	2
Sudan	1474926	3
India Contribution	**26.29 %**	

Total Camel Milk – 1.64 Million MTS **Countries producing camel milk- 25**		
Country	Production (MTS)	Position in World
Somalia	870000	1
Ethiopia	194000	2
Mali	1287000	3
India Contribution	**0.00 %**	

WORLD ESTIMATES OF MEAT & EGG PRODUCTION (2008)

Total Meat Prod.- 279.95 Mil.MTS **No. of countries producing meat- 210**		
Country	Production (MTS)	Position in World
China	74538697	1
U.S.A	43171484	2
India	**6795916**	**5**
India Contribution	**2.43 %**	

Cattle Meat – 62.36 Million MTS **Countries producing cow meat- 203**		
Country	Production (MTS)	Position in World
U.S.A	12235600	1
Brazil	9024000	2
India	**1258248**	**10**
India Contribution	**7.62 %**	

Buffalo Meat Production- 3.36 Mil.MTS **No. of countries producing meat- 25**		
Country	Production (MTS)	Position in World
India	1496748	1
Pakistan	7080000	2
China	306437	3
India Contribution	**44.35 %**	

Sheep Meat – 8.26 Million MTS **Countries producing sheep meat- 188**		
Country	Production (MTS)	Position in World
China	1978000	1
Australia	693000	2
India	**237120**	**7**
India Contribution	**2.87 %**	

Total Chicken Meat – 79.37 Mil.MTS **Countries producing chicken meat- 203**		
Country	Production (MTS)	Position in World
USA	16677000	1
China	11054320	2
India	**2490000**	**5**
India Contribution	**3.14 %**	

Egg Production – 65.59 Million MTS **No. of countries producing eggs- 204**		
Country	Production (MTS)	Position in World
China	26734250	1
USA	5338700	2
India	2740000	3
India Contribution	**2.87 %**	

WORLD ESTIMATES OF LIVESTOCK POPULATION (2008)

Cattle - 1347.473 Millions No. of Countries having Cattle - 207		
Country	Population (Millions)	Position in World
Brazil	175.437	1
India	174.510	2
USA	96.669	3
India Contribution	**13.02 %**	

Buffaloes - 180.703 Millions No. of Countries having Buffaloes - 41		
Country	Population (Millions)	Position in World
India	98.595	1
Pakistan	29.883	2
China	23.272	3
India Contribution	54.56%	

Sheep - 1078.179 Millions No. of Countries having Sheep - 190		
Country	Population (Millions)	Position in World
China	136.436	1
Australia	79.000	2
India	64.989	3
India Contribution	**12.65%**	

Goats - 861.902 Millions No. of Countries having Goats - 196		
Country	Population (Millions)	Position in World
China	149.377	1
India	125.732	2
Pakistan	56.742	3
India Contribution	**14.59%**	

Pigs - 941.282 Millions No. of Countries having Pigs - 187		
Country	Population (Millions)	Position in World
China	446.423	1
USA	65.909	2
India	**14.000**	**11**
India Contribution	**3.14%**	

Chicken - 18398.436 Millions No. of Countries having Chicken - 206		
Country	Population (Millions)	Position in World
China	4602.278	1
USA	2059.000	2
India	**621.800**	**5**
India Contribution	**3.38 %**	

VETERINARY AND ANIMAL HUSBANDRY EXTENSION EDUCATION

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1	Agriculturism is the characteristic feature of							
	a	Rural society	b	Tribal society	c	Urban society	d	Metro society
2	An example of primary group							
	a	Tea club	b	University	c	Dairy Co-operative society	d	Family
3	Which of the following is a formal institution?							
	a	Charhca Mandal	b	Bhajana Mandal	c	School	d	Tea shop
4	Superstition is more in							
	a	Urban society	b	Rural society	c	Tribal society	d	Metro Society
5	Father of Sociology							
	a	Adam Smith	b	August Comte	c	A.R.Desai	d	Aristotle
6	Study of the laws of the structure and functions of the rural society is known as							
	a	Sociology	b	Human Sociology	c	Rural Sociology	d	None of the above
7	The science of Rural Sociology studies							
	a	Rural people	b	Problems of the rural people	c	Rural social organizations	d	All of the above
8	Tendency of the people to think of their culture as best is known as							
	a	Egoism	b	Ethnocentrism	c	Ethno medicine	d	All of the above
9	Socially prescribed forms of behaviour, transmitted by traditions and enforced by social disapproval of its violation is called as							
	a	Culture	b	Norms	c	Mores	d	Taboos
10	Prohibition of vaccination of animals against Foot and Mouth Disease due to some misbelief is an example							
	a	Culture	b	Norms	c	Mores	d	Taboos
11	An example for covert culture is							
	a	Dress	b	Industrial Products	c	Folk ways	d	Attitudes
12	Which of these factors play role in social change							
	a	Geographic	b	Economic	c	Political	d	All of the above
13	In Which of the following roles, Veterinarian acts as a change agent							
	a	Veterinary Doctor treating animals in the hospital	b	Veterinarian as a scientist	c	Veterinarian as a Extension Education specialist	d	None of the above
14	Which of the following is an example for Technological factor of social change							

	a	Artificial Insemination	b	Floods	c	Government Schemes providing subsidies to Artificial Insemination	d	Dairy Co-operative movement
15	Which of the following phrase aptly apply to Extension Education?							
	a	Continuous Process	b	Educative process	c	Two way Process	d	All of the above
16	Extension is learning by doing while seeing is							
	a	Learning	b	Explaining	c	Believing	d	Convincing
17	Extension education is a/an							
	a	Basic science	b	Applied Science	c	Pure Science	d	Not a Science
18	The difference between 'what is' and 'what is ought to be' is called as							
	a	Problem	b	Need	c	Wealth	d	Constraint
19	The expression of the ends towards which the efforts are directed is							
	a	Goal	b	Need	c	Problem	d	Scarcity
20	The process by which a person becomes changed in his behaviour through self activity							
	a	Attention	b	Objective	c	Learning	d	Teaching
21	First step in extension teaching process							
	a	Satisfaction	b	Affection	c	Attention	d	Concentration
22	Extension is							
	a	Non formal Education	b	Informal Education	c	Formal Education	d	Adult Education
23	Extension education is							
	a	Helping people	b	Giving money to people	c	Helping people to help themselves	d	None of the above
24	Etawah pilot project was started in the year							
	a	1948	b	1958	c	1951	d	1947
25	Shantiniketan was started by							
	a	Mahatma Gandhi	b	Ravindranath Tagore	c	S.K.Dey	d	Bankim Chandra Chaterjee
26	Gurgaon experiment was initiated by							
	a	Albert Mayor	b	F.L.Bryne	c	S.K.Dey	d	Spencer Hatch
27	The term extension was formally first introduced in 1873 by							
	a	Oxford university	b	Cambridge university	c	Karnataka university	d	Delhi university
28	Firka development scheme was started in Madras state during							
	a	1919	b	1921	c	1943	d	1947
29	Community Development Programme was started in the year							
	a	1952	b	1985	c	1945	d	1955

30	Community Development lays more emphasis on							
	a	Assistance from Government	b	People's participation	c	Guidance by political leaders	d	Assistance from International agencies
31	Main aim of Community Development Programme is to							
	a	Give money to people	b	Develop poor people	c	Develop rich people	d	Overall development of the people
32	Main objective/s of the Community Development is / are							
	a	To assist in building good panchayats, co-operatives and schools	b	Provide minimum health services	c	Providing recreational facilities	d	All of the above
33	Person overseeing the Community Development activities at block level was							
	a	Deputy Commissioner	b	Assistant Commissioner	c	Block Development Officer	d	Gram Sevak
34	Which of the following is not a group teaching method?							
	a	Meeting	b	Buzz session	c	Cinema	d	Circular letter
35	Ideal method for showing the poultry farmers how to mix a medicine in water							
	a	Method Demonstration	b	Result Demonstration	c	Home Visit	d	Office Call
36	An example for audio aid							
	a	Television	b	Radio	c	News Paper	d	Drama
37	Television is							
	a	Audio aid	b	Visual aid	c	Audio-visual aid	d	Individual aid
38	Which of the following is an example for individual contact method							
	a	Television	b	News Paper	c	Circular letter	d	Home visit
39	Most appropriate teaching method during disease outbreak is							
	a	Campaign	b	Television show	c	Health camps	d	Home visit
40	Cone of experience was developed by							
	a	J.P.Legans	b	Daniel Benor	c	A.T. Mosher	d	Edger Dale
41	An important limitation of Radio is							
	a	Less coverage	b	High Cost	c	One way communication	d	Not understandable
42	Which of the following extension teaching method is best for all conditions							
	a	Individual	b	Group	c	Mass	d	Combination of all the above

43	Which of the following is not an example of projected teaching aid						
	a	LCD	b	OHP	c	Slide Projector	d	Poster
44	To capture the milk market of four metropolitan cities is one to the objective of operation flood phase						
	a	I	b	II	c	III	d	IV
45	The per capita availability of milk per day in India as on 2003 was						
	a	210g	b	220g.	c	190g.	d	280g.
46	India stands at _____ place in regard to goat population in the world						
	a	1^{st}	b	2^{nd}	c	3^{rd}	d	4^{th}
47	Organisation at national level to promote trade of egg						
	a	Egg Cooperative Society	b	Poultry Development Board	c	National Egg Co-ordination Committee	d	National Dairy Development Board
48	National Dairy Development Board (NDDB) is located at						
	a	New Delhi	b	Karnal	c	Anand	d	Kolkota
49	The state of India having highest production of milk						
	a	UttarParadesh	b	Madhya Pradesh	c	Punjab	d	Karnataka
50	An example for non-perishable dairy product						
	a	Cream	b	Butter	c	Milk Powder	d	Curd
51	Highest egg production state in the country						
	a	Karnataka	b	Tamil Nadu	c	Uttarpradesh	d	Andhra Pradesh
52	Market risks are due to						
	a	Loss of Product	b	Destruction of product	c	Change in the price of product	d	Both a and b
53	Quinequennial census conducted for livestock in India is conducted once in every						
	a	Year	b	10 years	c	5 years	d	2 years
54	The stage in programme planning which follows the stage of evaluation is						
	a	Reevaluation	b	Analysis of situation	c	Reconsideration	d	Appraisal
55	Key village scheme was started in the year						
	a	1951	b	1952	c	1947	d	1945
56	SGSY was launched in the year						
	a	1999	b	2007	c	2002	d	2005
57	Farmer having less than 1 hectare of dry land only is classified as						
	a	Small Farmer	b	Marginal Farmer	c	Large Farmer	d	Landless Labourer
58	A crash programme providing various inputs into dairy farming besides A.I. Service intended to crossbred non-descript cattle in the milk shed areas was						
	a	Key Village Scheme	b	IRDP	c	ICDP	d	Goshalas
59	Segregated, old, infirm and unproductive cattle are maintained in						
	a	Goshalas	b	Gosadans	c	Milk Sheds	d	Village Pastures
60	The principle of co-operation implies that non-alignment to any political body and						

	observance of neutrality are the fundamental aspects to be observed in a co-operative society comes under the principle of							
	a	Economic Independence	b	Political Neutrality	c	Cultural Neutrality	d	Cultural Dependence
61	The second tier in the dairy co-operative organization is							
	a	Primary Milk Producers' Co-operative Society	b	District Milk Union	c	State Milk Federation	d	NDDB
62	At state level, the milk co-operatives are governed by							
	a	Primary Milk Producers' Co-operative Society	b	District Milk Union	c	State Milk Federation	d	NDDB
63	Architect of White revolution in India							
	a	Tribhuvandas Patel	b	Verghese Kurien	c	Sardar Vallabh Bhai Patel	d	Balwantrai Mehta
64	Maintenance of rural veterinary institutions is looked after by							
	a	Taluka Panchayat	b	Gram Panchayat	c	Zilla Panchayat	d	State Government
65	In the word democracy, 'cracy' means 'rule of' and 'demos' means							
	a	Demons	b	People	c	King	d	Army
66	The first state to implement panchayati Raj							
	a	Andhra Pradesh	b	Rajasthan	c	Haryana	d	Karnataka
67	The president of the Zilla Panchayat is elected by							
	a	Members of Zilla Panchayat	b	Presidents of Taluka Panchayats	c	MLAs	d	MPs
68	The committee that recommended Panchayati Raj was headed by							
	a	Tribhuvandas Patel	b	Verghese Kurien	c	Sardar Vallabh Bhai Patel	d	Balwantrai Mehta
69	Village water supply is the main function of							
	a	Gram panchayat	b	Taluka panchayat	c	Zilla panchayat	d	All of the above
70	Gram sabha should meet at least once in							
	a	A year	b	Six months	c	Three months	d	A month
71	The present chairman of Planning Commission							
	a	Montek Singh Ahluwalia	b	Manmohan Singh	c	Atal Bihari Vajpayee	d	P.Chidambaram
72	Outline of activities so arranged so as to enable effective execution of programme is called as							
	a	Programme Cycle	b	Span of work	c	Plan of work	d	Evaluation
73	Duration of XI five year plan							

	a	1992-97	b	1997-2002	c	2002-07	d	2007-12
74	Judging the effectiveness of the programme is called as							
	a	Analysis of situation	b	Reconsideration	c	Selection of Problems	d	Evaluation
75	Programme planning is a							
	a	Rigid process	b	Flexible process	c	Both a & b	d	None of the above
76	Most common type of farming in India							
	a	Mixed	b	Specialized	c	Diversified	d	Individual
77	Basic unit in 'Anand pattern' of dairy co-operatives							
	a	Dairy co-operative society	b	Milk union	c	Milk federation	d	Farmer's family
78	Highest per capita availability of milk in India is in the state of							
	a	Punjab	b	Karnataka	c	Maharashtra	d	Haryana
79	First phase in programme development cycle							
	a	Developing blueprint	b	Reconsideration	c	Collection of facts	d	Developing plan
80	Basic unit in Panchayat Raj system is							
	a	Gram Panchayat	b	Taluka Panchayat	c	Zilla Panchayat	d	Block samithi
81	Highest milk producing country in the world							
	a	India	b	USA	c	Canada	d	Australia
82	Duration of X five year plan							
	a	2007-2012	b	2006-2011	c	2005-2010	d	2002-2007
83	Last phase in programme development cycle							
	a	Developing blueprint	b	Reconsideration	c	Collection of facts	d	Developing plan
84	Chairman of Gram Panchayat is elected by							
	a	Directly by the villagers	b	By the members of the Gram Panchayat	c	Members of the Taluk Panchayat	d	Members of the dairy co-operative society
85	Concept of multipurpose village level worker was first introduced in							
	a	Etawah Pilot project	b	Gurgaon experiment	c	Nelokheri attempt	d	Sevagram attempt
86	Which of the following is an example for organized market?							
	a	A village sandy	b	APMC	c	Milk vendors	d	All
87	An area covering a group of continuous village having a population of thousand cows and buffaloes is known as							
	a	ICDP block	b	Key village block	c	Milk union	d	Breeding unit
88	ICDP was started in the year							

	a	1965	b	1980	c	1975	d	1999
89	Duration of operation flood – I							
	a	1970-81	b	1980-90	c	1978-85	d	1947-52
90	An example for co-operative society is							
	a	Village agricultural co-operative	b	Dairy co-operative society	c	Oil seed growers' co-operative society	d	All
91	First agricultural university in India was started at							
	a	Pantnagar	b	Izzatnagar	c	Palampur	d	Bangalore
92	First chairperson of NDDB							
	a	Amrita Patel	b	Tribhuvandas Patel	c	Verghese Kurien	d	Vallabh Bhai Patel
93	Present chairperson of NDDB							
	a	Amrita Patel	b	Tribhuvandas Patel	c	Verghese Kurien	d	Vallabh Bhai Patel
94	Present union minister of Rural Development							
	a	C.P. Thakur	b	C.P. Joshi	c	Manishankar Iyer	d	P. Chidambaram
95	MMPO was launched in the year							
	a	1992	b	1999	c	2007	d	2002
96	Mother dairies are operated by							
	a	NECC	b	NDDB	c	AMUL	d	Central government
97	The type of farming in which crop production is combined with livestock farming is known as							
	a	Specialised farming	b	Mixed farming	c	Co-operative farming	d	Diversified farming
98	The first KVK was established in							
	a	Pantnagar	b	Pondicherry	c	Chennai	d	Bareilly
99	The information for evaluation can be collected at							
	a	Initial stage	b	Intermediary stage	c	Final stage	d	At all stages
100	Outline of activities arranged chronologically is called as							
	a	Plan of work	b	Calendar of work	c	Outline of work	d	Work sheet
101	Most ideal method to teach the dairy farmers about clean milk production is							
	a	Method demonstration	b	Result demonstration	c	Frontline demonstration	d	National demonstration
102	An intensive teaching activity undertaken at an opportune time for a brief period of time, focusing attention in a concerted manner towards a particular problem so as to stimulate widest possible interest in the community							
	a	Propaganda	b	Publicity	c	Campaign	d	Animal health camp

103	A form of social change which is thought to occur due to predetermined blind forces of nature, fate or divine province is called as						
	a	Pendular change	b	Evolutionary change	c	Unlinear change	d	None of the above
104	Which of these is / are characteristics of social change						
	a	Universal phenomenon	b	Speed of change varies	c	Law of nature	d	All of the above
105	Interpersonal relations are more informal in						
	a	Rural society	b	Urban society	c	Cosmopolite society	d	Tribal society
106	Which of the following is not a step in extension teaching						
	a	Satisfaction	b	Desire	c	Interest	d	Compulsion
107	Guragoan attempt was initiated by						
	a	Alberti Mayor	b	F.L Bryne	c	S.K.Dey	d	Vinoba Bhave
108	Which of the following is an author of the book on Veteinary / Animal Husbandry Extension						
	a	O.P. Dahama	b	Adivi Reddy	c	Peru Mathiyalagan	d	G.L.Ray
109	To show worth of a new feed formulation to the farmers, effective teaching method is						
	a	Method demonstration	b	Result demonstration	c	Farm visit	d	Group discussion
110	Education status is higher in						
	a	Rural Society	b	Urban society	c	Tribal society	d	Nomadic society
111	Coefficient of correlation ranges from						
	a	1 to 2	b	0 to 1	c	-1 to + 1	d	0 to infinity
112	The test of choice for comparing two variances is						
	a	F-test	b	Chi-square	c	Z – test	d	t – test
113	A statistical test used to compare two group means in small sample is known as						
	a	ANOVA	b	Chi-square	c	Z – test	d	t – test
114	In large samples, comparing the means of two groups, test statistic that can be used is						
	a	ANOVA	b	Chi-square	c	Z – test	d	t – test
115	Tabulation is the process of arranging data into						
	a	Row and columns	b	Tables	c	Classes and tables	d	Both a & b.
116	Karl Pearson method is used in						
	a	Z-test	b	Correlation coefficient	c	F – test	d	DMR – test
117	In testing of hypothesis, if the calculated value is greater than that of table value, then null hypothesis is						
	a	Accepted	b	Rejected	c	Revised	d	None
118	The precision of experiment can be increased by						
	a	Increasing number of treatments	b	Decreasing number of treatments	c	Increasing number of replications	d	Decreasing number of replications

119	Median of milk production from cattle can be depicted by							
	a	Pie diagram	b	Frequency curve	c	Cumulative frequency curve	d	None
120	Most frequently occurring value in a series is called as							
	a	Mean	b	Median	c	Mode	d	None

ANSWER KEY

1	a	31	d	61	b	91	a
2	d	32	d	62	c	92	c
3	c	33	c	63	b	93	a
4	c	34	c	64	b	94	b
5	b	35	a	65	b	95	a
6	c	36	b	66	b	96	b
7	d	37	c	67	a	97	b
8	b	38	d	68	d	98	b
9	b	39	a	69	a	99	d
10	d	40	d	70	b	100	b
11	d	41	c	71	a	101	a
12	d	42	d	72	c	102	c
13	c	43	d	73	d	103	c
14	a	44	b	74	d	104	d
15	d	45	b	75	c	105	a
16	c	46	a	76	a	106	d
17	b	47	c	77	a	107	b
18	b	48	c	78	a	108	c
19	a	49	a	79	c	109	b
20	c	50	c	80	a	110	b
21	c	51	d	81	a	111	c
22	b	52	c	82	d	112	a
23	c	53	c	83	b	113	d
24	a	54	c	84	b	114	c
25	b	55	a	85	a	115	d
26	b	56	a	86	b	116	b
27	b	57	b	87	b	117	b
28	c	58	c	88	a	118	a
29	a	59	b	89	a	119	c
30	b	60	b	90	d	120	c

VETERINARY AND ANIMAL HUSBANDRY EXTENSION EDUCATION

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1	Extension literally means							
	a	Stretching out	b	Talking with	c	Deciding for	d	Thinking about
2	The father of demonstration in Extension is							
	a	Seamann Knapp	b	Robert Chambers	c	G D Thorde	d	James Stewart
3	Extension can be considered as							
	a	Service	b	Profession	c	Discipline	d	All the above
4	Farmers first model was proposed by							
	a	A Reddy	b	R Chambers	c	Van den Ban	d	R M Rogers
5	The basic unit of Extension work is							
	a	Individual	b	society	c	family	d	Community
6	An extension worker is a							
	a	Professional leader	b	Lay leader	c	Local leader	d	Voluntary leader
7	The last stage in extension education process is							
	a	Evaluation	b	Reconsideration	c	adoption	d	Teaching
8	The steps in extension teaching was put forward by							
	a	Paul Leagens	b	Curt Lewin	c	Ensminger	d	Wilson& Galup
9	‘People learn more rapidly and permanently when the learning experience is pleasant or enjoyable’ relates to							
	a	Law of readiness	b	Law of exercise	c	Law of effect	d	Law of belonging
10	Learning should make sense to the learners							
	a	Principle of readiness	b	Principle of clarity	c	Principle of practice	d	Principle of timing
11	`The cone of experience was developed by							
	a	Edger Dale	b	Berlo C K	c	Kuldeep Nair	d	S C Parmer
12	The extension worker tells about the varieties characters to a farmer, the farmer learns by							
	a	Abstraction	b	Learning	c	Intelligence	d	Questioning
13	Farm and Home visit is classified under							
	a	Individual contact	b	Group Contact	c	Mass Contact	d	None
14	To show relative worth of a new practice, the extension method best suited is							
	a	Result demonstration	b	Method demonstration	c	Campaign	d	Group discussion
15	The method used when the farmers is not there in the field while the extension worker make a visit:							
	a	Farm and Home visit	b	Method demonstration	c	Result demonstration	d	Flag method
16	A systematic display of models, specimens, etc. in a sequence around a theme:							

	a	Exhibition	b	Farmers fair	c	demonstration	d	campaign
17	A body of general principles or laws of a field of knowledge:							
	a	Objectives	b	Philosophy	c	Mandate	d	principle
18	The most preferred approach in extension work is							
	a	Autocratic	b	democratic	c	Lessiz fair	d	None
19	The difference between what is and what ought to be							
	a	need	b	aim	c	goal	d	Objective
20	A blue print for action is							
	a	plan	b	Programme	c	Objective	d	Project
21	The extension programme is a statement of							
	a	Situation and objective	b	Solution and problems	c	Problems and solutions	d	All the above
22	Measuring performance against predetermined goals is called							
	a	Management	b	Evaluation	c	Measurement	d	Supervision
23	The technique used for projects involving activities of non-repetitive nature is							
	a	CPM	b	WBS	c	PERT	d	PRA
24	The person considered as father of PRA							
	a	Neils Rolling	b	Robert Chambers	c	Van den Ban	d	Paul Leagans
25	The collection of data in RRA is based on							
	a	Extension workers	b	Multidisciplinary team	c	Research scientists	d	Progressive farmers
26	The general micro-unit of an agro-ecosystem							
	a	District	b	Village	c	Farmer	d	Household
27	ATMA operates at							
	a	block level	b	District level	c	state level	d	National level
28	The apex training institute at state level to give training support to ATMA							
	a	MANAGE	b	EEI	c	CAPART	d	SAMETI
29	The first KVK was established in							
	a	Calcutta	b	Mumbai	c	Coimbatore	d	Pondicherry
30	The extension service in USA is called							
	a	NES	b	Extension work	c	CES	d	RES
31	Land Grant Colleges came into existence as part of							
	a	Smith Liver act	b	Morill act	c	Hatch act	d	Extension act
32	The English equivalent of the word *communis* is							
	a	Information	b	Talk	c	common	d	None of the above
33	Levels of communication are							
	a	Conventional	b	Exploratory	c	Participative	d	All the above
34	The way in which message is handled before placing in the channel							
	a	Decoding	b	Treatment	c	Distortion	d	feedback
35	The type of audience best suited for communication process is called							
	a	Active audience	b	Potential audience	c	Available audience	d	None of the above
36	The degree which individuals involved in communication differ in certain characteristics							
	a	Homophily	b	credibility	c	empathy	d	heterophily

37	Constant feedback between sender and the receiver is the characteristic feature of							
	a	Interpersonal communication	b	Mass communication	c	Written communication	d	Vertical communication
38	The SMCR model of communication is given by							
	a	Berlo	b	laswell	c	Rogers	d	Leagens
39	LCD expends to							
	a	Lazier Crystal Digital	b	Lazier Crystal Display	c	Liquid Crystal Display	d	Liquid Crystal Digital
40	The principle used in slide-cum-film projector							
	a	Direct projection	b	Indirect projection	c	Reflected projection	d	Diffused projection
41	Amplifier is a							
	a	Electronic medium	b	Print medium	c	Written medium	d	None of these
42	Primary colours used in extension are							
	a	Red, Blue, Yellow	b	Red, Blue, Green	c	Red, Blue, Purple	d	Red, Yellow, Green
43	The teaching aid which best represents suspense, sequence and story telling effects							
	a	Flash card	b	Flannel graph	c	Flip chart	d	All the above
44	The ABC of journalism is related to							
	a	Accuracy, Brevity, Credibility	b	Accuracy, Brevity, Clarity	c	Accountable, Brief, Clear	d	Active, Brief, Clear
45	The technology flow in the farmer first model is basically from							
	a	Agent to farmer	b	Researcher to agent	c	Farmer to farmer	d	Researcher to farmer
46	The spread of technology in a social system							
	a	Diffusion	b	Teaching	c	Learning	d	Adoption
47	The idea which is perceived as new is termed as							
	a	Information	b	Innovation	c	Perception	d	Invention
48	An innovation can be considered to have originated from							
	a	Farmer research	b	Extension programme	c	Research trails	d	All the above
49	An innovation with low relative advantage may have							
	a	Slow rate of adoption	b	High rate of discontinuance	c	Low return on investment	d	All of the above
50	Individual adopters in a social system is described in terms of his							
	a	Economic conditions	b	Time of adoption	c	Frequency of adoption	d	Concurrence ability
51	The term innovation decision process was given by							
	a	Wilkening	b	Rogers	c	Johnson and Rogers	d	Ryan and Gross
52	An activity through which an individual becomes aware of the objectives around one self and of events taking place							
	a	Participation	b	perception	c	Perpetuation	d	Predetermination
53	The term Homophily and heterophily were given by							
	a	Rogers	b	Gabriel Tarde	c	Lazersfield and	d	None of the above

						Merton		
54	The theory of social change was put forward by							
	a	D Berlo	b	K Lewin	c	E M Rogers	d	P Leagens
55	Essential characteristics of a primary group is							
	a	Face to face contact	b	Personal & emotional	c	Interpersonal proximity	d	Unity in diversity
56	Te decision to make use of a innovation as best course of action							
	a	Adoption	b	Diffusion	c	Innovation	d	Technology
57	The first stage in the process of adoption according to Rogers is							
	a	Attention	b	Interest	c	desire	d	satisfaction
58	Adopter categories are the classification of the members of the social system on the basis of							
	a	Innovativeness	b	Adoption process	c	Diffusion process	d	None
59	The character best represent an innovator							
	a	Venturesome	b	Skeptical	c	Traditional	d	Respectfulness
60	Discontinuance occurs only after an innovation has been							
	a	Fully adopted	b	Partially adopted	c	Not at all adopted	d	None of the above
61	Agriculturism is the characteristic feature of							
	a	Rural society	b	Tribal society	c	Urban society	d	Metro society
62	An example of primary group							
	a	Tea club	b	University	c	Dairy Co-operative society	d	Family
63	Which of the following is a formal institution?							
	a	Charhca Mandal	b	Bhajana Mandal	c	School	d	Tea shop
64	Superstition is more in							
	a	Urban society	b	Rural society	c	Tribal society	d	Metro Society
65	Father of Sociology							
	a	Adam Smith	b	August Comte	c	A.R.Desai	d	Aristotle
66	Study of the laws of the structure and functions of the rural society is known as							
	a	Sociology	b	Human Sociology	c	Rural Sociology	d	None of the above
67	The science of Rural Sociology studies							
	a	Rural people	b	Problems of the rural people	c	Rural social organizations	d	All of the above
68	Tendency of the people to think of their culture as best is known as							
	a	Egoism	b	Ethnocentrism	c	Ethno medicine	d	All of the above
69	An example for covert culture is							
	a	Dress	b	Industrial Products	c	Folk ways	d	Attitudes
70	Which of these factors play role in social change							
	a	Geographic	b	Economic	c	Political	d	All of the above
71	In Which of the following roles, Veterinarian acts as a change agent							
	a	Doctor	b	Veterinarian as	c	Veterinarian as	d	None of the above

		treating animals in the hospital		a scientist		a Extension Education specialist		
72	Which of the following is an example for Technological factor of social change							
	a	Artificial Insemination	b	Floods	c	Government Schemes providing subsidies to Artificial Insemination	d	Dairy Co-operative movement
73	Which of the following phrase aptly apply to Extension Education?							
	a	Continuous Process	b	Educative process	c	Two way Process	d	All of the above
74	Extension is learning by doing while seeing is							
	a	Learning	b	Explaining	c	Believing	d	Convincing
75	Extension education is a/an							
	a	Basic science	b	Applied Science	c	Pure Science	d	Not a Science
76	The difference between ‘what is’ and ‘what is ought to be’ is called as							
	a	Problem	b	Need	c	Wealth	d	Constraint
77	The expression of the ends towards which the efforts are directed is							
	a	Goal	b	Need	c	Problem	d	Scarcity
78	The process by which a person becomes changed in his behaviour through self activity							
	a	Attention	b	Objective	c	Learning	d	Teaching
79	First step in extension teaching process							
	a	Satisfaction	b	Affection	c	Attention	d	Concentration
80	Extension is							
	a	Non formal Education	b	Informal Education	c	Formal Education	d	Adult Education
81	Extension education is							
	a	Helping people	b	Giving money to people	c	Helping people to help themselves	d	None of the above
82	Shantiniketan was started by							
	a	Mahatma Gandhi	b	Ravindranath Tagore	c	S.K.Dey	d	Bankim Chandra Chaterjee
83	Gurgaon experiment was initiated by							
	a	Albert Mayor	b	F.L.Bryne	c	S.K.Dey	d	Spencer Hatch
84	The term extension was formally first introduced in 1873 by							
	a	Oxford university	b	Cambridge university	c	Karnataka university	d	Delhi university
85	Community Development Programme was started in the year							
	a	1952	b	1985	c	1945	d	1955
86	Main aim of Community Development Programme is to							
	a	Give money to people	b	Develop poor people	c	Develop rich people	d	Overall development of the people
87	Main objective/s of the Community Development is / are							
	a	To assist in building good panchayats,	b	Provide minimum health services	c	Providing recreational facilities	d	All of the above

		co-operatives and schools						
88	Person overseeing the Community Development activities at block level was							
	a	Deputy Commissioner	b	Assistant Commissioner	c	Block Development Officer	d	Gram Sevak
89	Ideal method for showing the poultry farmers how to mix a medicine in water							
	a	Method Demonstration	b	Result Demonstration	c	Home Visit	d	Office Call
90	An example for audio aid							
	a	Television	b	Radio	c	News Paper	d	Drama
91	Television is							
	a	Audio aid	b	Visual aid	c	Audio-visual aid	d	Individual aid
92	Which of the following is an example for individual contact method							
	a	Television	b	News Paper	c	Circular letter	d	Home visit
93	Most appropriate teaching method during disease outbreak is							
	a	Campaign	b	Television show	c	Health camps	d	Home visit
94	An important limitation of Radio is							
	a	Less coverage	b	High Cost	c	One way communication	d	Not understandable
95	Which of the following extension teaching method is best for all conditions							
	a	Individual	b	Group	c	Mass	d	Combination of all the above
96	Which of the following is not an example of projected teaching aid							
	a	LCD	b	OHP	c	Slide Projector	d	Poster
97	The per capita availability of milk per day in India as on 2008 was							
	a	210g	b	220g.	c	190g.	d	252g.
98	Organization at national level to promote trade of egg							
	a	Egg Cooperative Society	b	Poultry Development Board	c	National Egg Co-ordination Committee	d	National Dairy Development Board
99	National Dairy Development Board (NDDB) is located at							
	a	New Delhi	b	Karnal	c	Anand	d	Kolkota
100	The state of India having highest production of milk							
	a	UttarParadesh	b	Madhya Pradesh	c	Punjab	d	Karnataka
101	An example for non-perishable dairy product							
	a	Cream	b	Butter	c	Milk Powder	d	Curd
102	Highest egg production state in the country							
	a	Karnataka	b	Tamil Nadu	c	Uttarpradesh	d	Andhra Pradesh
103	The stage in programme planning which follows the stage of evaluation is							
	a	Reevaluation	b	Analysis of situation	c	Reconsideration	d	Appraisal
104	Key village scheme was started in the year							
	a	1951	b	1952	c	1947	d	1945
105	Segregated, old, infirm and unproductive cattle are maintained in							
	a	Goshalas	b	Gosadans	c	Milk Sheds	d	Village Pastures
106	The second tier in the dairy co-operative organization is							

	a	Primary Milk Producers' Co-operative Society	b	District Milk Union	c	State Milk Federation	d	NDDB
107	At state level, the milk co-operatives are governed by							
	a	Primary Milk Producers' Co-operative Society	b	District Milk Union	c	State Milk Federation	d	NDDB
108	Architect of White revolution in India							
	a	Tribhuvandas Patel	b	Verghese Kurien	c	Sardar Vallabh Bhai Patel	d	Balwantrai Mehta
109	The committee that recommended Panchayati Raj was headed by							
	a	Tribhuvandas Patel	b	Verghese Kurien	c	Sardar Vallabh Bhai Patel	d	Balwantrai Mehta
110	Village water supply is the main function of							
	a	Gram panchayat	b	Taluka panchayat	c	Zilla panchayat	d	All of the above
111	The present chairman of Planning Commission							
	a	Montek Singh Ahluwalia	b	Manmohan Singh	c	Atal Bihari Vajpayee	d	P.Chidambaram
112	Outline of activities so arranged so as to enable effective execution of programme is called as							
	a	Programme Cycle	b	Span of work	c	Plan of work	d	Evaluation
113	Duration of XII five year plan							
	a	2007-12	b	1997-2002	c	2002-07	d	2012-17
114	Judging the effectiveness of the programme is called as							
	a	Analysis of situation	b	Reconsideratio n	c	Selection of Problems	d	Evaluation
115	Which of the following is not included in the steps of extension teaching?							
	a	Conviction	b	Satisfaction	c	Subject matter	d	Desire
116	The study team headed by Balawantaray Mehta is constituted in 1957 for the purpose of ……							
	a	To identify the drawbacks and weakness of CD programmes and NES	b	To suggest the remedial measures for the success of CD and NES	c	a and b both are correct	d	To establish the democratic decentralization in India
117	Which of the following is pioneer state to establish panchayat raj first in the country							
	a	Andhra pradesh	b	Rajasthan	c	Karnataka	d	Tamilnadu
118	In Panchayat Raj Institutions (PRIs) reservation to the candidates belonging to SCs & Sts is made at all levels							
	a	50 % of the total members	b	1/3 of the total members	c	In proportion to their population and area	d	40 % of the total members
119	The no. of seat reserved for women in Panchayat Raj Institions equal to…….							
	a	½ of the total no. of seat	b	1/4 of the total no. of seat	c	1/10 of the total no. of seat	d	1/3 of the total no. of seat

120	Which of the following statement is true W.R.T. Gram Sabha ?							
	a	Entire population of the village constitute gram sabha	b	All adult members registered as voters in the area of panchayat constitutes gram sabha	c	Only elected members of panchayat constitute gram sabha	d	All of the above

ANSWER KEY

1	a	31	b	61	a	91	c
2	a	32	c	62	d	92	d
3	d	33	b	63	c	93	a
4	b	34	b	64	c	94	c
5	c	35	a	65	b	95	d
6	a	36	d	66	c	96	d
7	b	37	a	67	d	97	d
8	d	38	a	68	b	98	c
9	c	39	c	69	d	99	c
10	b	40	a	70	d	100	c
11	a	41	a	71	c	101	c
12	a	42	a	72	a	102	d
13	a	43	d	73	d	103	c
14	a	44	b	74	c	104	b
15	d	45	c	75	b	105	a
16	a	46	a	76	b	106	b
17	b	47	b	77	a	107	c
18	b	48	d	78	c	108	b
19	a	49	b	79	c	109	d
20	a	50	b	80	a	110	a
21	b	51	b	81	c	111	b
22	b	52	b	82	b	112	c
23	c	53	c	83	b	113	d
24	b	54	b	84	b	114	d
25	b	55	b	85	a	115	c
26	b	56	a	86	d	116	c
27	b	57	a	87	d	117	b
28	d	58	a	88	c	118	c
29	d	59	a	89	a	119	d
30	c	60	a	90	b	120	b

IMPORTANT POINTS ABOUT ICAR, NEW DELHI

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- 1905-Agricultural Research Institute was established at Pusa, Bihar by Lord Curzon. The land was donated by Mr.Phipps of USA after whom the place was named as PUSA. The Phipps laboratory in division of soil science and agricultural chemistry at IARI is named after him.
- 1929- Royal Commission on Agriculture, headed by Lord Linlithgow recommended the setting up of Imperial Council of Agricultural research.
- 23 May 1929- Imperial Council of Agricultural research established.
  President: Khan Bahadur Sir Mohd Habibullaha,
  Vice President: Diwan Bahadur Sir Vijay Raghavacharya
  Secrteary: Mr.S.A.Hydari
- 1936- Imperial council of Agricultural research shifted to Delhi
- March 1946- renamed as Indian Council of Agricultural research
- 1965-Dr.B.P.Pal became first Director General of ICAR
- 1966-ICAR made fully autonomous
- 1973-DARE- Dept of Agricultural Research & Education created.
  ARS-Agricultural Research Service initiated.
- 1974-KVK's started based on Mohan Singh Mehta committee report.
- First KVK started at Pondicherry by Tamilnadu Agri University.
- Central Agri University is at Shillong.
- National Research Centre (NRC) on Camel-Bikaner,
- National Research Centre (NRC) on Equines-Hisar,
- National Research Centre (NRC) on Meat-Hyderabad,
- National Research Centre (NRC) on Mithun-Jharnapani (Nagaland),
- National Research Centre (NRC) on Yak-Dirang (Arunachal Pradesh).
- Project Directorate on Poultry-Hyderabad
- Project Directorate on Cattle-Meerut
- Project Directorate on FMD- Mukteshwar
- Central Institute for Research on Buffalo-Hisar,
- Central Institute for Research on Goat-Makhdoom
- Central Sheep & Wool Research Institute-Avikanagar

- Central Avian Research Institure - Izatnagar
- National Institute for Animal Nutrition & Physiology-Adugodi, Banglore
- High Security Animal Disease Diagnostic Laboratory-Bhopal
- National Biotechnology Centre on Animal Health-Izathnagar
- National Biotechnology Centre on Animal Production-Karnal
- National Bureau of Animal Genetic Resources-Karnal
- National Bureau of Plant Genetic Resources-New Delhi
- National Bureau of Fish Genetic Resources-Allahabad
- National Bureau of soil survey and land use planning-Nagpur

Deemed Universities under ICAR, New Delhi

- Indian Veterinary Research Institute (IVRI) at Izatnagar, Bareilly (U.P)
- Indian Agricultural Research Institute (IARI) at Pusa, New Delhi
- National Dairy Research Institute at Karnal, Haryana
- Central Institute for Fisheries Education at Mumbai.