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Test Booklet Series

A

T. B. C. : VS – 2 – 2018

TEST BOOKLET

VETERINARY ASSISTANT SURGEON Sl. No. 2233

PAPER – II

(Animal Science)

Time Allowed : 2½ Hours

Maximum Marks : 400

: INSTRUCTIONS TO CANDIDATES :

1. IMMEDIATELY AFTER THE COMMENCEMENT OF THE EXAMINATION, YOU SHOULD CHECK THAT THIS TEST BOOKLET DOES NOT HAVE ANY UNPRINTED OR TORN OR MISSING PAGES OR ITEMS ETC. IF SO, GET IT REPLACED BY A COMPLETE TEST BOOKLET OF THE SAME SERIES ISSUED TO YOU.
2. ENCODE CLEARLY THE TEST BOOKLET SERIES A, B, C OR D, AS THE CASE MAY BE, IN THE APPROPRIATE PLACE IN THE ANSWER SHEET USING BALL POINT PEN (BLUE OR BLACK).
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5. This Test Booklet contains **200** items (questions). Each item (question) comprises four responses (answers). You have to select the correct response (answer) which you want to mark (darken) on the Answer Sheet. In case, you feel that there is more than one correct response (answer), you should mark (darken) the response (answer) which you consider the best. In any case, choose **ONLY ONE** response (answer) for each item (question).
6. You have to mark (darken) all your responses (answers) **ONLY** on the **separate Answer Sheet** provided by using **BALL POINT PEN (BLUE OR BLACK)**. See instructions in the Answer Sheet.
7. All items (questions) carry equal marks. All items (questions) are compulsory. Your total marks will depend only on the number of correct responses (answers) marked by you in the Answer Sheet.
8. Before you proceed to mark (darken) in the Answer Sheet the responses to various items (questions) in the Test Booklet, you have to fill in some particulars in the Answer Sheet as per the instructions sent to you with your **Admission Certificate.**
9. After you have completed filling in all your responses (answers) on the Answer Sheet and after conclusion of the examination, you should hand over to the Invigilator the *Answer Sheet* issued to you. You are allowed to take with you the candidate's copy / second page of the Answer Sheet along with the **Test Booklet**, after completion of the examination, for your reference.
10. Sheets for rough work are appended in the Test Booklet at the end.

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1. Pullet is female of :
   (A) Turkey
   (B) Duck
   (C) Chicken
   (D) Quail

2. Perosis is caused due to deficiency of :
   (A) Calcium
   (B) Phosphorus
   (C) Manganese
   (D) Iron

3. Average egg weight (g) of quail is which of the following :
   (A) 10
   (B) 15
   (C) 20
   (D) 25

4. The main source of energy of the developing embryo drives during last phase of development is from which of the following :
   (A) Yolk sac
   (B) Carbohydrate
   (C) Fat
   (D) All of the above

5. Maize is deficient in the following amino acids :
   (A) Methionine and lysine
   (B) Methionine and Arginine
   (C) Lysine and Arginine
   (D) Lysine and Tryptophan

6. In idealistic population the family selection cannot be better than the individual selection if the :
   (A) Heritability is low
   (B) Selection intensity is high
   (C) Heritability of family is larger than the individual basis
   (D) None of the above

7. Ranikhet vaccination can be done by the following route :
   (A) Intra muscular
   (B) Intra peritoneal
   (C) Subcutaneous
   (D) All of the above

8. Rank of India in egg production is :
   (A) 8^{th}
   (B) 6^{th}
   (C) 5^{th}
   (D) 4^{th}

9. Egg albumin is secreted by :
   (A) Infundibulum
   (B) Magnum
   (C) Isthmus
   (D) Uterus

10. Luteinizing Hormone (LH) from the anterior pituitary causes :
   (A) Release of a mature yolk
   (B) Oviduct to develop
   (C) Increase in blood calcium
   (D) Normal laying and secretion of albumen

11. The thyroid hormones affects :
    (A) Metabolic rate of the bird
    (B) Feather growth and colour
    (C) All of the above
    (D) None of the above

12. The tendem method of selection is preferred over independent culling level if :
    (A) Genetic correlations between traits are desirable
    (B) Phenotypic correlations between traits are positive
    (C) No correlations between the traits
    (D) None of the above

13. Family selection of the method of choice for traits with :
    (A) Low heritability
    (B) High heritability
    (C) Expression in one sex only
    (D) Large families

14. Proof that genetic variance exists at the stage of selection limit :
    (a) If there is response to reserve selection
    (B) If the population mean remains constant
    (C) Heritability remains constant
    (D) Reduction in phenotypic variance

15. Which is not the characteristic of the lines choosen for reciprocal recurrent selection ?
    (A) Differ in gene frequency
    (B) High level of performance
    (C) Inbreed
    (D) Good combining ability

16. The superiority of a selection index in multi-trait selection largely depends upon the accuracy of estimation of :
    (A) Heritability of the trait
    (B) Relative weights of the traits
    (C) Genetic and phenotypic variance and covariance
    (D) Repeatability of the traits

17. The effective number of parents under pedigreed random breeding control population will be :
    (A) 1/Ne = 1/4 M + 1/4 F
    (B) 1/Ne = 3/16 M + 1/16 F
    (C) 1/Ne = 3/32 M + 1/32 F
    (D) 1/Ne = 3/32 M + 1/32 F

18. The goal of the selection can be defined under :
    (A) Artificial selection
    (B) Natural selection
    (C) Both artificial and the natural selection
    (D) None of the above

19. Which one is not polysaccharides ?
(a) Raffinose
(B) Dextrins
(C) Inulin
(D) Cellulose

20. In birds the main end product of protein metabolism are :
(A) Uric acid
(B) Allatoin
(C) Urea nitrogen
(D) Nitrate nitrogen

21. Which is not classified as Basic amino acid ?
(A) Arginine
(B) Valine
(C) Histidine
(D) Lysine

22. Which one of the following is not a saturated fatty acid ?
(A) Palmitic acid
(B) Arachidic acid
(C) Stearic acid
(D) Arachidonic acid

23. Which of the following was also considered lately as an essential mineral ?
(A) Zinc
(B) Cobalt
(C) Selenium
(D) Chromium

24. Which is non-glycerol based lipid ?
(A) Lecithines
(B) Cephalines
(C) Triolein
(D) Steroides

25. Which is the main non-protein nitrogenous components of Berseem herbage ?
(A) Ammonia Nitrogen
(B) Amide Nitrogen
(C) Amino Nitrogen
(D) Nitrate Nitrogen

26. Which of the following is essential in prevention of perosis in chicks ?
(A) Choline
(B) Biotin
(C) Folic acid
(D) Pantothenic acid

27. Who was the first to unravel the secret of biological reproduction and heredity ?
(A) Charles Darwin
(B) Thomas Hunt Morgan
(C) John Gregor Mendel
(D) James D. Watson

28. The mahogany and red colors in cattle represent a good example to illustrate :
(A) Sex-influenced inheritance
(B) Sex-limited inheritance
(C) Sex-linked inheritance
(D) None of these

29. The first case of mutation was discovered in :
(A) Drosophila
(B) Garden pea
(C) Male lamb
(D) Neurospora

30. Recurrent selection is practised to utilize :
(A) Dominant deviation
(B) Additive variance
(C) Non- additive variance
(D) Environmental variation

31. Selection is effective for those traits which are governed by :
(A) Additive genes
(B) Dominant genes
(C) Epistatic genes
(D) All of the above

32. Sib selection in cattle is recommended for :
(A) Sex- linked trait
(B) Sex-limited trait
(C) Sex-influenced trait
(D) None of the above

33. The epistasis type of gene action is important for growth rate in poultry. Therefore, the type of selection practices is :
(A) Recurrent Selection
(B) Pedigree Selection
(C) Reciprocal Recurrent Selection
(D) All of these

34. Manifold effects of a gene refer to :
(A) Penetrance
(B) Expressivity
(C) Pleiotropy
(D) Epistasis

35. _____ to the phenomenon of inbreeding depression is its opposite, 'hybrid vigour' or 'heterosis'.
(A) Complementary
(B) Supplementary
(C) Additive
(D) Multiplicative

36. The magnitude of inbreeding coefficient of close inbreeding under full-sib mating reaches 0.500 after _____ generation.
(A) 2
(B) 3
(C) 4
(D) 5

37. In a statistical hypothesis testing experiment, what type of error is committed by rejecting the null hypothesis when it is true :
(A) Type – I
(B) Type – II
(C) Type – I and Type – II
(D) None of the above

38. Which of the following has maximum chromosome number ?
(A) Pig
(B) Horse
(C) Camel
(D) Dog

39. Meat of buffalo is known as :
(A) Beef
(B) Carabeef
(C) Mutton
(D) Chevon

40. Which animal contribute maximum to the milk production of India ?
(A) Goat
(B) Buffalo
(C) Cow
(D) Sheep

41. Gestation period of cow and buffalo respectively (in days) are :
(A) 310 and 282
(B) 282 and 310
(C) 336 and 250
(D) 250 and 336

42. Normal body temperature of cattle is _____ (^{o}F).
(A) 100.8 – 102.4
(B) 100.4 – 101.7
(C) 100.9 – 102
(D) 101.6 – 103

43. Which of the following animal has maximum pulse rate ?
(A) Horse
(B) Cattle
(C) Pig
(D) Dog

44. One ml of ejaculate of bull has how many million of sperms ?
(A) 1100
(B) 1300
(C) 1500
(D) 1800

45. Silent heat occurs in cow (in days) postpartum :
(A) 10 – 13
(B) 13 – 15
(C) 15 – 18
(D) 60

46. Age of sexual maturity in cattle (in years) :
(A) 1 – 2
(B) 2 – 8
(C) 2 – 3
(D) 4 – 5

47. The feed conversion efficiency is maximum in :
(A) Cattle
(B) Poultry
(C) Pig
(D) Camel

48. Mixed farming incorporates which of the following ?
(A) Crop production
(B) Animal production
(C) Both of the above
(D) Mixed crop production

49. Which river is richest fresh water fish's source in India ?
(A) Jamuna
(B) Chambal
(C) Ganga
(D) Narmada

50. Skeleton of fetus is made up of :
(A) Bone only
(B) Cartilage only
(C) Mostly bone
(D) Mostly cartilage

51. Which structure is between the bone to bone joint ?
(A) Ligament
(B) Tendon
(C) Both (A) and (B)
(D) None of the above

52. Which of the following is absorbed in omasum ?
(A) Water
(B) Volatile fatty acid
(C) Both of the above
(D) None of the above

53. Which of the following breed of buffalo has Maximum milk fat percentage in its milk ?
(A) Murrah
(B) Jaffarabadi
(C) Mehsana
(D) Nagpuri

54. Central cattle breeding farm for Thaparkar is located at :
(A) Suratgarh
(B) Jaisalmer
(C) Sirsa
(D) Hissar

55. NDRI is situated at :
(A) Izzatnagar
(B) Karnal
(C) Delhi
(D) Ludhiana

56. Which method is useful for experimental farm ?
(A) Artificial insemination
(B) Flock system
(C) Pen system
(D) Hand system

57. Why close grazing occur in sheep ?
(A) Due to small muzzle
(B) Due to split upper lip
(C) Both (A) and (B)
(D) None of the above

58. How much water needed for an adult sheep ?
(A) 2 litter water/ day during winter
(B) 3.5 – 4 litre water/day during summer
(C) 2 – 3 litre water/every 1 kg of dry feed
(D) All of the above

59. Goat meat from which breed is more delicious ?
(A) Black Bengal and Angora Chevon
(B) Nubian
(C) Chigu and Changthangi
(D) Marwari and Beetal

60. Is gestation heat present in goat :
(A) Yes
(B) No
(C) May be
(D) Depend on age

61. Which contributes richness of flavour of milk ?
(A) Phospholipid
(B) Galactolipid
(C) Glycolipid
(D) Cholesterol

62. Ham is :
(A) Which comes from back and join
(B) Which comes from sides
(C) Comes from loin and sides
(D) Comes from rear quarters

63. Nutritional deficiency occurs more in which of the following ?
(A) Pig
(B) Ruminant
(C) Both (A) and (B)
(D) Camel

64. Fat from pig carcass after it has been tendered is known as :
(A) Gammon
(B) Lard
(C) Ham
(D) All of the above

65. Pressure of hand milking should be :
(A) 25 – 40 mm of Hg
(B) 25 – 50 mm of Hg
(C) 35 – 40 mm of Hg
(D) 35 – 50 mm of Hg

66. Specific gravity of milk is :
(A) 0.94
(B) 1
(C) 1.030
(D) 1.050

67. Which is the most heat tolerate exotic breed of cattle ?
(A) H. F.
(B) Jersy
(C) Ayreshire
(D) Brown Swiss

68. The factor responsible for initiating cell division is :
(A) Cytoplasmic index
(B) DNA
(C) Karyoplasmic index
(D) Nucleus

69. Crossing over takes place between :
(A) Sister Cromatid
(B) Non-sister cromatid
(C) Cromosome
(D) Cromonema

70. The type of cell division which takes place only once in cell lifetime, is called :
(A) Amitosis
(B) Meiosis
(C) Mitosis
(D) Free cell division

71. Crossing over takes place in :
(A) Mitosis
(B) Meiosis – I
(C) Meiosis – II
(D) All of the above

72. What happens in crossing over ?
(A) Duplication of chromosome
(B) Linkage in chromosomes
(C) Minimization in Genetic material
(D) Exchange of Genetic material

73. Role of mutation in evolution is:-
(A) Reproductive isolation
(B) Genetic variation
(C) Genetic drift
(D) None of these

74. Which is a tetrasomic condition ?
(A) 2n – 1
(B) 2n + 1 + 1
(C) 2n + 2
(D) 2n + 3

75. Mutation induced by S-bromouracil are :
(A) Transversional mutation
(B) Transitional mutation
(C) Frame shift mutation
(D) Backward mutation

76. Enzyme useful in genetic engineering is :
(A) Lipase
(B) DNase
(C) Restriction endonuclease
(D) Amylase

77. Daughter of colour blind father and normal mother marries a normal person colour blindness in the family shall be :
(A) 50% son
(B) 50% daughter
(C) 50% off springs
(D) 50% son and 50% daughter

78. Sum total of genes in a population is :
(A) Genotype
(B) Phenotype
(C) Karyotype
(D) Gene pool

79. The enzyme which combines with a non-protein prosthetic group to form a functional enzyme is called :
(A) Coenzyme
(B) Proenzyme
(C) Holoenzyme
(D) Apoenzyme

80. Chromosome which do not have centromere is called :
(A) Monocentric
(B) Diacentric
(C) Acentric
(D) Polycentric

81. Diagrammatic representation of the karyotype is called :
(A) Cladogram
(B) Cryptogram
(C) Idiogram
(D) All of the above

82. Mitosis can occur in which of the following ?
(A) Haploid cells
(B) Diploid cells
(C) Polyploid cells
(D) All of the above

83. The minimum number of chiasmata in a pair is :
(A) One
(B) Two
(C) Three
(D) Four

84. During karyokinesis the chromosome exhibit minimum coiling at which phase ?
(A) Prophase
(B) Metaphase
(C) Anaphase
(D) Interphase

85. Drones are :
(A) Sterile males
(B) Sterile females
(C) Fertile females
(D) Fertile males

86. Which excretory material is least toxic ?
(A) Ammonia
(B) Urea
(C) Uric Acid
(D) Trimethyl amine oxide

87. The variance ratio in case of 'F' test is _____ than one.
(A) Less
(B) More
(C) Equal
(D) None of the above

88. Most efficient form of breeding is :
(A) In-breeding
(B) Out-breeding
(C) Both of the above
(D) None of the above

89. In-breeding coefficient is a measure of increase of :
(A) Homozygosity
(B) Heterozygosity
(C) Both of the above
(D) None of the above

90. Breeding system by which a few pure breed sires can rather quickly transform a non-descript population into the purebred is called :
(A) Cross breeding
(B) Live breeding
(C) Out crossing
(D) Grading up

91. Who described the operon concept in E coli ?
(A) Mendel, Darwin
(B) Hugo de Vries, Muller
(C) Miller, Muller
(D) Francis Jacob and Jacques Monod

92. H. J. Muller reported that the X-rays induces :
(A) Selection
(B) Mutation
(C) Migration
(D) Aberration

93. Common wheat with 42 chromosomes is :
(A) Tetraploid
(B) Triploid
(C) Octaploid
(D) Hexaploid

94. The sex chromosomes of females and males are respectively :
(A) XX in females and XY or (XO) in males
(B) XY in females XX in males
(C) XO in females XX in males
(D) XX in females and XX in males

95. Dr. Hargobind Khurana has been awarded nobel prize for research on :
(A) Oral contraceptives
(B) Hormones
(C) Genetic code
(D) Immunology

96. Name the breed of poultry with black meat :
(A) Aseel
(B) Tellichery
(C) Kadaknath
(D) All of these

97. Double humped camels are found in :
(A) Rajasthan
(B) Gujrat
(C) Ladakh
(D) All of these

98. Pashmina is obtained from :
(A) Angora rabbit
(B) Angora goat
(C) Karakul sheep
(D) None of these

99. Pregnancy feeding allowance in cow should start after :
(A) 6 months
(B) 8 months
(C) 3 months
(D) None of these

100. The human liver cannot produce :
(A) Starch
(B) Glycose
(C) Glycogen
(D) None of these

101. TCA cycle is operative in :
(A) Mitochondria
(B) Microsomes
(C) Cytosol
(D) None of these

102. Phosphorylase A converts :
(A) Glucose to fructose
(B) Fructose to glucose
(C) Glycogen to glucose 1-p
(D) None of the above

103. Increased NADPH will favour the formation of :
(A) Saturated fatty acids
(B) Unsaturated fatty acids
(C) None of the above
(D) All of the above

104. Starch is hydrolysed by :
(A) Amylase
(B) Phosphorylase
(C) Hexokinase
(D) None of these

105. Testosterone is secreted by :
(A) Germinal epithelium
(B) Interstitial cells
(C) Sertoli cells
(D) None of the above

106. Castration of the male calf causes total loss of :
(A) Erection
(B) Ejaculation
(C) Sexual desire
(D) All of the above

107. A small amount of progesterone is required for the :
(A) Maintenance of cropus luteum
(B) Non-contractile condition of the uterus
(C) Ovulation
(D) None of the above

108. In case of rodents the hormone that is responsible for maintenance of corpus luteum is :
(A) Follile stimulating hormone
(B) Luteinizing hormone
(C) L. T. H.
(D) None of the above

109. In the development of under estrogen takes part in causing :
(A) Tubular development
(B) Alveolar development
(C) Development of milk cistern
(D) None of the above

110. Clinical significance of vagus nerve increase and prostaglandin fibres is :
(A) Motor
(B) Sensory
(C) Mixed
(D) None of the above

111. Signs of persistent oestrus at frequent but irregular intervals lead to :
(A) Nymphomania
(B) Split oestrus
(C) None of the above
(D) All of the above

112. Ketone bodies include which of the following ?
(A) Aceto-acetic acid
(B) Acetone
(C) Beta hydroxybutyric acid
(D) All of these

113. The quantity of glomerular filtrate formed each minute in all the nephrons of both the kidneys is called :
(A) GF
(B) GFR
(C) FGC
(D) None of the above

114. The hormones are chemically _____ or steroid in nature.
(A) Protein
(B) Fat
(C) Vitaminous
(D) Sterol

115. Amino acids which are not synthesized in the body are known as :
(A) Non-essential
(B) Essential
(C) Both of the above
(D) None of the above

116. The principal function of colon is _____ of water and electrolytes from the chime.
(A) Absorption
(B) Excretion
(C) Both of the above
(D) None of the above

117. Secretions of seminal vesicles :
(A) Is alkaline
(B) Is of no importance to reproduction
(C) Is mucoid
(D) None of the above

118. Which of the following is not an anticoagulant ?
(A) Heparin
(B) Sodium oxalate
(C) Calcium chloride
(D) EDTA

119. Ovulation can occur at ovulation fossa in the following species :
(A) Ewe
(B) Cow
(C) Horse
(D) None of these

120. Sodium pump decreases the concentration of sodium ions inside the nerve fiber to :
(A) 5 m Eq/1
(B) 10m Eq/1
(C) 142mEq/1
(D) 150mEq/1

121. Successful embryo development in the recipient is dependent :
(A) On the age and stage of embryonic development at the time of transfer
(B) On the uterine environment of the recipient only
(C) On the level of maternal plasma estrogen
(D) All of the above

122. In the parturition process :
(A) The oxytocin increase is followed by prostaglandin increase
(B) The oxytocin increase is preceded by prosterglandin increase
(C) Oxytocin and prostaglandin act simultaneously
(D) None of the above

123. The hypothalamus contains centre which can :
(A) Increase the rate of heat loss
(B) Decrease the rate of heat production
(C) Decrease the rate of heat loss
(D) All of the above

124. Cold stress increases the hormonal output of :
(A) Adrenal medulla
(B) Adrenal cortex
(C) Thyroid
(D) All of the above

125. Which hormones when excessively secreted results in alkalosis ?
(A) Growth hormone
(B) Cortisol
(C) Aldosterone
(D) Anti-diuretic hormones

126. The commonly used drug that can be employed to superovulate mare :
(A) PMSG
(B) Equine follicle stimulating hormone
(C) Equine chorionic gonadotropin
(D) Stilboesterol

127. The inhibin is secreted from cell of :
(A) Leydig
(B) Sertoli
(C) Epididymis
(D) None of the above

128. The endocrine glands are _____.
(A) Ductless
(B) Not
(C) True
(D) False

129. Pancreatic trypsinogen is converted to trypsin by the following enzyme mainly present in the duodenal juice :
(A) Pancreozymine
(B) Peptidase
(C) Enterokinase
(D) Carbonic anhydrase

130. Oxytocin synthesis occurs in following structures of the brain :
(A) Basal ganglia
(B) Hypothalamus
(C) Medulla oblongata
(D) Cerebellum

131. Na^+ is retained under the influence of :
(A) Aldosterone
(B) Anti-diuretic hormone
(C) Oxytocin
(D) All of the above

132. Urine of cattle is of what nature ?
(A) Acidic
(B) Basic
(C) Neutral
(D) None of these

133. Which part of ruminant stomach is known as pouch ?
(A) Rumen
(B) Reticulum
(C) Omasum
(D) Abomasum

134. Length of rumen papilla is :
(A) 1 cm
(B) 10 cm
(C) 1m
(D) 20 cm

135. Hb_4O_3 have Iron in :
(A) Fe++
(B) Fe+++
(C) Both (A) and (B)
(D) None of these

136. Respiratory pressure of O_2 in arterial blood is :
(A) 48 mm Hg
(B) 46 mm Hg
(C) 40 mmHg
(D) 50 mm Hg

137. RBC membrane impermeable to which of the following ?
(A) Cation
(B) Anion
(C) Both (A) and (B)
(D) None of these

138. Which of the following is rate of respiration in cow ?
(A) 12
(B) 36
(C) 26
(D) 30

139. Clinical condition of bluishness of skin and mucosa is known as :
(A) Bluinosis
(B) Cyanosis
(C) Blackness
(D) All of the above

140. Renal blood flow is controlled by Juxta glomerular cells through :
(A) Renin angeotensin system
(B) Prostaglandins of medulla
(C) Epinephrine
(D) All of the above

141. Percentage of CH_4 in rumen is :
(A) 7
(B) 65
(C) 6
(D) 25

142. Percentage of CO_2 in rumen is :
(A) 7
(B) 65
(C) 6
(D) 25

143. Total protozoa ($X10^6$) in buffalo is which of the following ?
(A) 1 – 2
(B) 2 – 11
(C) 3 – 20
(D) 1.5 – 8

144. Types of bacteria in rumen is which of the following ?
(A) Gram – ve cocci
(B) Non-spore formation
(C) Anaerobes
(D) All of the above

145. A muscle possesses higher water holding capacity in :
(A) Rigor state
(B) Pre-rigor state
(C) Post-rigor state
(D) Any of the above

146. When collagen is heated in the water to 80°C :
(A) Collagen remains insoluble
(B) Collagen begins to be converted into gelatin
(C) Collagen fibers get only shortened
(D) Any of the above

147. Most aluminium foil used is known to be dead soft which has good folding characteristics which belongs to :
(A) "O" temper
(B) "H – 12" temper
(C) "H – 14" temper
(D) All of the above

148. As per PFA standards, the maximum limit for added diacetyl content in deshi butte is :
(A) 3 ppm
(B) 5 ppm
(C) 2 ppm
(D) Nil

149. The permitted antioxidant in ghee is :
(A) BHA
(B) BHT
(C) NDGA
(D) Ethyl gallate

150. Salmonellosis is an example for which of the following ?
(A) Infectious type of food poisoning
(B) Non-infectious type of food poisoning
(C) Chemical food poisoning
(D) None of the above

151. Protein content of white meat is :
(A) Lesser than red meat
(B) Higher than red meat
(C) Equal to red meat
(D) No comparison with red meat

152. Which is firm meat ?
(A) Pork
(B) Chevon
(C) Mutton
(D) Chicken

153. Maximum fat present in which meat ?
(A) Carabeef
(B) Beef
(C) Pork
(D) Rabbit

154. Which is maximum SPC for pasteurized milk ?
(A) 0 / ml
(B) 100 / ml
(C) 30,000 / ml
(D) 1 lac / ml

155. Acid treatment of collagen produce :
(A) Collagen
(B) Elastin
(C) Gelatin
(D) Reticulin

156. Which meat has cherry red color ?
(A) Mutton
(B) Pork
(C) Chevon
(D) Beef

157. Brown color of meat is due to :
(A) Oxyhaemoglobin
(B) Oxymyoglobin
(C) Methmyoglobin
(D) All of these

158. Meat is more firm :
(A) In older animal
(B) During chilling
(C) Both (A) and (B)
(D) In younger animal

159. Shelf life of vacuum packaging cuts for lambs is :
(A) 10 days
(B) 2 weeks
(C) 3 weeks
(D) 8 – 10 weeks

160. Curing solution known as :
(A) Salt peter
(B) Salt
(C) Pickle
(D) All of these

161. Which is bactericidal in smoking ?
(A) HCHO
(B) Phenol
(C) Both (A) and (B)
(D) Saw dust/hard wood

162. Which heat is more effective ?
(A) Moist
(B) Dry
(C) Mixture
(D) 60 : 40 combination

163. Extra chromosomal piece is known as :
(A) Cosmid
(B) Episome
(C) Plasmid
(D) Bacteriophage

164. In polymerase chain reaction which of the following is required essentially ?
(A) DNA ligase
(B) DNA primer
(C) DNA polymerase
(D) None of the above

165. Antibodies that recognize only one epitaph and derived from a single clone is called :

(A) Polyclonal antibodies
(B) Monoclonal antibodies
(C) Monovalent antibodies
(D) Bivalent antibodies

166. The initiation codon for translation in prokaryotes is :

(A) UGA
(B) AUG
(C) GAU
(D) UUA

167. ELISA rest essentially required the following :

(A) Antigen, antibody and conjugate
(B) Antigen, antibody, substrate and ELISA plate
(C) Antigen, antibody, conjugate, substrate and ELISA plate
(D) Antigen, antibody and ELISA plate

168. Who associated with hybridoma technology ?

(A) Saiki
(B) Butler and Chase
(C) Zinkernagel and Doharty
(D) Kohler and Milestein

169. Number of base pair units in a singie turn of DNA is :

(A) 4
(B) 6
(C) 8
(D) 10

170. AtpH, the direction of migration of glutamic acid in electrophoresis is towards :

(A) Cathod
(B) Anode
(C) No migration
(D) Both cathode and anode

171. The pH of a buffer to be used for the separation of Lysine and Histidine in cation exchange column is :

(A) 2
(B) 4
(C) 8
(D) 12

172. The metabolism of amino acid is initiated by :

(A) Deamination
(B) Hydrogenation
(C) Amination
(D) None of the above

173. In the Watson-Crick model for the DNA the (distance between the 1′ carbons on the deoxyribose moieties of A + T or G + C were :
(A) 1.1 nm
(B) 2.1 nm
(C) 3.1 nm
(D) Different always

174. In polymerase chain reaction, number of oligonucleotide primers used is :
(A) One
(B) Five
(C) Four
(D) Two

175. The lethal gene ratio is :
(A) 8 : 1
(B) 2 : 1
(C) 4 : 1
(D) 1 : 1

176. The fragments of DNA attached to an RNA initiator component was discovered by :
(A) Watson and Crick
(B) Okazaki
(C) Peterson
(D) Nelson

177. The carbon atom at position 4 and 5 and the nitrogen atom at the position 7 of purine base are supplied from :
(A) Valine
(B) Alanine
(C) Glycine
(D) Serine

178. In protein synthesis 'start 'signal is made by codon :
(A) UAG
(B) UAA
(C) UGA
(D) AUG

179. Small molecule contaminants from a protein can be removed by :
(A) Filtration
(B) Dialysis
(C) Solvolysis
(D) Solvent partition

180. Which of the following is an amino acid without chiral centre ?
(A) Glycine
(B) Serine
(C) Threonine
(D) Tryptophan

181. Community Development Programme were introduced in India for rural development :
(A) In early 40's
(B) In early 50's
(C) In early 60's
(D) In early 70's

182. New name of V. L. W. is :
(A) V. L. O.
(B) V. D. O.
(C) R. D. O.
(D) None of these

183. For long term requirement the farmers do not depend upon :
(A) Government
(B) Land Development Banks
(C) The Money Lenders
(D) Cooperative Credit Societies

184. The development plans of a district and coordination of activities of a Panchayat Samiti, is responsibilities of which of the following :
(A) Gram Pradhan
(B) Pramukh
(C) Zila Parishad
(D) Block Development Officer

185. Rural Development Programme should be formed to meet :
(A) Short term changes
(B) Emergent situation
(C) Long term changes
(D) All of the above

186. The first agricultural university of India is :
(A) P. A. U. Ludhiana (Punjab)
(B) H. A. U. Hissar (Haryana)
(C) A. P. A. U. Hyderabad (A. P.)
(D) B. B. P. U. A. and T. Pantnagar (UP)

187. A good extension programme should be :
(A) Flexible
(B) Rigid
(C) Both of the above
(D) None of the above

188. The idea of having a village guide in each village for introducing new skills among the rural people was introduced by :
(A) R. N. Tagore
(B) B. P. Pant
(C) Mahatma Gandhi
(D) F. L. Braynew

189. Special Livestock Production Programme was initiated in :
(A) 1974-75
(B) 1979-80
(C) 1978-79
(D) 1981-82

190. The national level body for policy formulation of Rural Development Programme in our country is :
(A) National Development Council
(B) Planning Commission
(C) Price Commission
(D) None of the above

191. TV includes :
(A) Audio and visual both devices
(B) Visual device
(C) Audio device only
(D) Not known, it is complicated item

192. Family of one male with many wives is known as :
(A) Polyandrous family
(B) Polygynous family
(C) Both of the above
(D) None of the above

193. Ancestral property inheritance from male to male is property of which family ?
(A) Nuclear family
(B) Combined family
(C) Patrilineal family
(D) Matrilineal family

194. Collection of more than one set of people to solve a joint problem is known as :
(A) Client system
(B) Co-operative system
(C) Commutative system
(D) Social system

195. Process by which individual maintains contact with its environment :
(A) Fidelity
(B) Perception
(C) Feedback
(D) Communication gap

196. Determine the suitability of new practice in prevailing situation is :
(A) Adaptive trial
(B) Mini kit trial
(C) Determining trial
(D) Both (A) and (B)

197. Decision not to adopt an innovation is known as :
(A) Implementation
(B) Rejection
(C) Persuasion
(D) Predictability

198. Written form of extension teaching methods does not include which of the following ?
(A) Bulletin
(B) Leaflet
(C) Pamphlet
(D) Black board

199. Traditional people oriented to past and never accept an innovation are known as :
(A) Innovation
(B) Adaptor
(C) Rejector
(D) Laggard

200. Operation flood II was started in :
(A) 1970
(B) 1978
(C) 1986
(D) 1969

SPACE FOR ROUGH WORK