DO NOT OPEN THIS TEST BOOKLET UNTIL YOU ARE ASKED TO DO SO

T. B. C. : VS – 2/13

Test Booklet Series

Serial No. 2285

A

TEST BOOKLET

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 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).
3. You have to enter your **Roll No.** on the Test Booklet in the Box provided along side. **DO NOT** write *anything else* on the Test Booklet.
4. This Test Booklet contains **200** items (questions). Each item (question) comprises four responses (answers). You will 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), mark (darken) the response (answer) which you consider the best. In any case, choose **ONLY ONE** response (answer) for each item (question).
5. 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.
6. 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. There will be negative markings for wrong answers. 25 percent of marks allotted to a particular item (question) will be deducted as negative marking for every wrong response (answer).
7. 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**.
8. After you have completed filling in all your responses on the Answer Sheet and after conclusion of the examination, you should hand over to the Invigilator the *Answer Sheet* and the *Test Booklet* issued to you. Yor are allowed to take with you the candidate's copy/second page of the Answer Sheet, after completion of the examination, for your reference.

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1. Platue in cardiac muscle is due to presence of :
   (a) Fast sodium channels
   (b) Fast potassium channels
   (c) Slow Na^{+} – Ca^{+2} channels
   (d) Slow chloride channels

2. P wave in ECG is caused by :
   (a) Spread of depolarization through atria
   (b) Spread of depolarization through ventricles
   (c) Spread of repolarization through ventricles
   (d) Spread of repolarization through atria

3. The atria contract during the following period in cardiac cycle :
   (a) Systole
   (b) First one-third of diastole
   (c) Second one-third of diastole
   (d) Last one-third of diastole

4. Deficiency of Vitamin B_{12} leads to :
   (a) Microcytic anemia
   (b) Megaloblastic anemia
   (c) Hypochromic anemia
   (d) Aplastic anemia

5. Lack of Vitamin K results in poor coagulation due to :
   (a) Decreased synthesis of fibrinogen
   (b) Decreased formation of prothrombin
   (c) Decreased formation of platelets
   (d) Due to precipitation of calcium ions

6. When RBC is suspended in isoosmotic fluid, it results in :
   (a) Swelling
   (b) Shrinkage
   (c) Lysis
   (d) No change

7. Which among the given is an excitatory neurotransmitter ?
   (a) Dopamine
   (b) Glycine
   (c) Seratonin
   (d) Glutamate

8. Rhodopsin is made up of :
   (a) II cis retinal
   (b) II cis retinol
   (c) All trans retinal
   (d) All trans retinol

9. The VFA which is capable of being used for gluconeogenesis :
   (a) Acetate
   (b) Propionate
   (c) Butyrate
   (d) Valarate

10. HCl is produced by :
    (a) Peptic cells
    (b) Parietal cells
    (c) Zymogen cells
    (d) Chief cells

11. Rumination is stimulated by :
    (a) Anesthetics
    (b) Hay diet
    (c) Fever
    (d) Concentrate diet

12. At proximal convoluted tubule, Hydrogen ion is secreted into lumen by :
    (a) Active transport
    (b) Counter co-transport
    (c) Simple diffusion
    (d) Co-transport

13. The term used for describing incordination of speech :
    (a) Dysarthria
    (b) Dysmetria
    (c) Dysdiadokinesia
    (d) Ataxia

14. The part of hypothalamus that regulates body temperature :
    (a) Supra optic unclei
    (b) Preoptic area
    (c) Mamillary body
    (d) Paraventricular nuclei

15. Which of the following compound stimulates N-M Junction by inactivating cholinesterase ?
    (a) Carbachol
    (b) Neostigmine
    (c) Curariforms
    (d) Nicotine

16. When a muscle is stimulated with rapidly succeeding stimuli (20/sec) the result response is :
    (a) Tetanus
    (b) Treppe
    (c) Recruitment
    (d) Fatigue

17. Which of the following shifts the Oxygen-Hb dissociation curve to right ?
    (a) When blood becomes slightly acidic
    (b) Decreased CO_2 concentration
    (c) Decrease in blood temperature
    (d) None of the above

18. Evaporative heat loss by sweating is important in :
    (a) Dog
    (b) Sheep
    (c) Pig
    (d) Man

19. The rate and pattern of breathing is controlled by :

(a) Dorsal respiratory group

(b) Pneumotaxic centre

(c) Ventral respiratory group

(d) Both (a) and (c)

20. The mean thickness of respiratory membrane in bird is :

(a) More than that in mammals

(b) Equal to that in mammals

(c) Less than that in mammals

(d) Thinner at corner points and thicker at another

21. Mitochondria which generate power necessary for the motility of sperm are in this part of spermatozoa :

(a) Head

(b) Mid piece

(c) Principal piece

(d) End piece

22. Development of alveoli in the mammary gland is influenced by :

(a) Prolactin

(b) Oxytocin

(c) Progesterone

(d) Estrogen

23. Ovulation fossa is in the ovary of :

(a) Cow

(b) Bitch

(c) Sheep

(d) Mare

24. Which of the following inhibits release of ADH ?

(a) Hyperosmotic ECF

(b) Low blood volume

(c) Anxiety

(d) Alcohol

25. Tropical animals have :

(a) Small loops of Henle

(b) Long loops of Henle

(c) Less sensitivity to ADH

(d) More water turnover rate

26. Which amongst the following are structurally not similar ?

(a) Growth Hormone and Prolactin

(b) Oxytocin and ADH

(c) Cortisol and Cortisone

(d) Thyroid and Parathyroid Hormone

27. ADH is responsible for :

(a) Diabetes mellitus

(b) Diabetes insipidus

(c) Pituitary diabetes

(d) Steroid diabetes

28. Second messenger formed during the protein hormone action on target is :

(a) Ca^{+2}

(b) Phospholipase

(c) c AMP

(d) Phosphodiesterase

29. Testosterone is produced by :

(a) Leydig cells

(b) Sertoli cells

(c) Germinal cells

(d) Granulosa cells

30. The word Extension derived from Latin roots 'tensio' means :

(a) Informal education

(b) Stretching

(c) Out of school system

(d) None of the above

31. According to use, Method Demonstration can be classified under :

(a) Group contact method

(b) Individual contact method

(c) Mass contact method

(d) Both (a) and (b)

32. Association of unlimited number of persons formed on the basis of equality for the promotion of members interest is called as :

(a) Co-operative Societies

(b) Association

(c) Federation

(d) Community

33. Representing the voice of the people is one of the functions of :

(a) Gram Panchayat

(b) Panchayat Samiti

(c) Zila Parishad

(d) State Government

34. Extreme form of closed class system is :

(a) Community

(b) Society

(c) Religion

(d) Caste

35. The end product of Extension Teaching is :

(a) Action

(b) Adoption

(c) Satisfaction

(d) Knowledge

36. Widow marriage is a classical example of :

(a) Social transformation

(b) Social change

(c) Cultural change

(d) Both (b) and (c)

37. In Anand pattern of Co-operative structure, state level apex body is called as :

(a) State Co-operative Federation

(b) State Co-operative Society

(c) State Co-operative Union

(d) None of the above

38. Extension Teaching Methods are classified by :

(a) Wilson and Gallup

(b) Adivi Reddy

(c) Chitambar

(d) Edgar Gale

39. Two dimensional projected visual aid is :

(a) Models

(b) Specimen

(c) Film strip

(d) All of the above

40. Urban community has :

(a) Greater density

(b) Less literacy

(c) Less social contact

(d) All of the above

41. Intensive teaching activity undertaken at an opportune time for a brief period :

(a) Campaign

(b) Tour

(c) Field Trip

(d) Exhibition

42. Play group can be classified under :

(a) Formal group

(b) Involuntary group

(c) Voluntary group

(d) All of the above

43. Extension programme deals with :

(a) Situation

(b) Objectives

(c) Solution

(d) All of the above

44. The Committee on Panchayati Raj headed by :

(a) S. L. Mehta

(b) B. R. Mehta

(c) V. Kurien

(d) M. S. Swaminathan

45. Collective ownership and operatorship are seen in :

(a) Co-operative joint farming

(b) Co-operative collective farming

(c) Peasant farming

(d) Co-operative better farming

46. Consumer society is :

(a) Credit Co-operative Society

(b) Non Credit Co-operative Society

(c) Marketing Society

(d) None of the above

47. Greater risk is involved in :

(a) Specialised farming

(b) Diversified farming

(c) Mixed farming

(d) Dry farming

48. A reward for the entrepreneurial function of decision making and uncertainty bearing is :

(a) Interest

(b) Profit

(c) Wages

(d) Rent

49. In distribution of wealth, rent can be paid to the services of :

(a) Labour

(b) Organisation

(c) Land

(d) Capital

50. The temporary equilibrium between demand and supply determines :

(a) Secular price

(b) Normal price

(c) Market price

(d) None of the above

51. Cross demand refers to change in demand due to change in :

(a) Income of the consumer

(b) Prices of related goods

(c) Price of a commodity

(d) All of the above

52. Additional milk obtained by feeding an additional unit of feed to a cow is known as :

(a) Average product

(b) Total product

(c) Marginal product

(d) None of the above

53. In the production function, Zone II is :

(a) Irrational

(b) Semi rational

(c) Rational

(d) All of the above

54. Best system of bookkeeping is :

(a) Single Entry System

(b) Cost Accountancy

(c) Double Entry System

(d) Classified Cost Accountancy

55. Perfectly inelastic demand curve will be :

(a) Horizontal to x-axis

(b) Vertical to x-axis

(c) Downward sloping

(d) Upward raising

56. The repayment of loan for the purchase of a Tractor on a firm is a :

(a) Long term liability

(b) Medium term liability

(c) Current liability

(d) None of the above

57. When two enterprises are competing with each other for the farmers limited resources, it is called as :

(a) Joint enterprise

(b) Complementary enterprise

(c) Supplementary enterprise

(d) Competitive enterprise

58. When two products are produced in the same production process, such relationship is called as :

(a) Competitive

(b) Complementary

(c) Supplementary

(d) Joint

59. Inserted DNA fragments with multiple recognition sequences for restriction endonucleases used for inserting additional DNA by cleavage and ligation are called :

(a) Plasmid

(b) rec DNA

(c) Polylinkers

(d) Chimera

60. Which among the following triggers directly the movement of GLUT-4 glucose transporters to the plasma membrane ?

(a) Epinephrine

(b) Cortisol

(c) Glucagon

(d) Insulin

61. Peptide hormones that carry information about the adequacy of the energy reserves in adipose tissue to other tissues and brain :

(a) Leptin

(b) Lecithin

(c) Lysine

(d) Lectin

62. The restriction endonuclease and the corresponding methylase are sometimes referred to as :

(a) Endonuclease system

(b) Host protection

(c) Restriction guest protection

(d) Restriction modification system

63. Which among the following blocks the *de novo* pathway of DNA synthesis ?

(a) Hypoxanthine

(b) Aminopterin

(c) Thymidine

(d) PEG

64. Peptide growth factor that increases the success of establishing and maintain ES cell lines :

(a) ESF

(b) $PGF_{2\alpha}$

(c) FSH

(d) LIF

65. One of the reasons for ketone body formation is :

(a) Drop in OAA

(b) Excess glucose metabolism

(c) Excess blood glucose

(d) Increase in Glucagon

66. Molecules that help in correct folding of improperly folded polypeptides are :

(a) Histones

(b) Chaperones

(c) Amyloid fibres

(d) Protomers

67. Carriers in ETC function in order of :

(a) Increasing reduction potential

(b) Decreasing reduction potential

(c) Based on their position in mitochondrion

(d) Based on order of enzymes

68. Treatment with proteolytic enzymes cuts a 323 residue piece containing the 5' – 3' exonuclease from DNA polymerase I leaving a larger C-terminal piece known as :

(a) Replisome

(b) Okazaki fragments

(c) Klenow fragment

(d) DNA polymerase II

69. Which one of the following lipoproteins is responsible for picking-up excess cholesterol in peripheral tissue capillary bed ?

(a) Chylomicrons

(b) LDL

(c) HDL

(d) VLDL

70. The principle behind chloride-bicarbonate shift is :

(a) Diffusion

(b) Osmosis

(c) Donnan's equilibrium

(d) Ex-osmosis

71. The phenomenon of β-γ bridging suggests :

(a) Chronic active hepatitis

(b) Acute mild hepatitis

(c) Mild hapatitis

(d) GI disorder

72. In which type and stage of Leptospirosis, there is normal BUN

levels initially and marked increase in BUN levels at later stages ?

(a) Hemorrhagic

(b) Haemolytic

(c) Icteric

(d) Uraemic

73. Intrahepatic cholestasis is indicated by elevated serum levels of which of the following ?

(a) ALT

(b) Glutamate dehydrogenase

(c) GGT

(d) Sorbitol dehydrogenase

74. Which among the following will not lead to respiratory acidosis ?

(a) Damage to respiratory centre in Medulla Oblongata

(b) Pneumonia

(c) Psychoneurosis

(d) Emphysema

75. The following diuretic inhibit water and solute reabsorption by increasing osmolarity of tubular fluid at proximal tubules :

(a) Mannitol

(b) Furosemide

(c) Spironolactone

(d) Acetazolamide

76. The plasma pH is best correlated with which of the ratio ?

(a) $H_2PO_4^- : HPO_4^{-2}$

(b) $NH_4^+ : NH_3$

(c) $H_2CO_3 : HCO_3^-$

(d) $HHb : Hb^-$

77. Most neutral fat in ruminant animal is synthesized from :

(a) Glucose

(b) Acetate

(c) Propionate

(d) Mannose

78. The activity of which enzyme below in the HMP shunt would be non-affected by thiamin deficiency ?

(a) Glucose 6-phosphate dehydrogenase

(b) 6-phosphoglucanate dehydrogenase

(c) Transketolase

(d) Tansaldolase

79. A deficiency of which one of the following B-complex vitamin would make it m ore deficient to convert Trp to NMN and therefore potentiate a niacin deficiency ?

(a) Pyridoxine

(b) Folic acid

(c) Biotin

(d) Riboflavin

80. The –OH group attached to the 2'-carbon atom of ribose is replaced by what in deoxyribose ?
(a) Sulph-hydryl group
(b) Oxygen
(c) Phosphate
(d) Hydrogen

81. The initiating (5') AUG is guided to its correct position by :
(a) DNA
(b) Shine-Dalgarno sequence
(c) fMet-tRNA^{fMet}
(d) Initiation complex

82. Which among the following is 4-O-β-D-glucopyranosyl-D-glucopyranose ?
(a) Cellobiose
(b) Isomaltose
(c) Maltose
(d) Lactose

83. While degradation which of the following amino acid does not get converted to α-ketoglutarate ?
(a) Proline
(b) Glutamine
(c) Threonine
(d) Arginine

84. Genetic code is the arrangement pattern of nucleotides in which of the following ?
(a) DNA
(b) mRNA
(c) tRNA
(d) rRNA

85. The catalytic subunit of protein kinase A, released when cAMP level rise, enters the nucleus and phosphorylates a nuclear protein called :
(a) CRE
(b) CREB
(c) SRA
(d) siRNA

86. Ideal place for insertion of DNA insert into a plasmid with two marker sites :
(a) oriC
(b) Place outside the markers
(c) Inside one marker
(d) Inside both markers

87. In Vitamin K deficiency :
(a) The liver stops its production of prothrombin
(b) Warfarin administration would have no effect
(c) The liver stops production of fibrinogen
(d) The liver continues its production of non-functional prothrombin

88. The no. of Protozoa present in one millilitre of rumen liquor is :
(a) 10^{9-10}
(b) 10^{16-17}
(c) 10^{6-7}
(d) 10^{2-4}

89. According to thumb rule, 1 kg of concentrate mixture is required for every _____ kg of milk yield in cows.
(a) 2.0
(b) 2.5
(c) 3.0
(d) 1.5

90. As the age of animal/human advances the following nutrient decreases :
(a) Carbohydrate
(b) Protein
(c) Fat
(d) Vitamins

91. Wolff-Lehman feeding standard developed in the year :
(a) 1903
(b) 1897
(c) 1884
(d) 1907

92. Dry matter content (%) in green para grass will be :
(a) 20
(b) 25
(c) 10
(d) 15

93. Endogenous Urinary Nitrogen (EUN) is analogous to :
(a) MFN
(b) Basal metabolism
(c) ME
(d) DE

94. Grinding of grains increases the digestibility, because of :
(a) Slower rate of passage in digestive tract
(b) Faster rate of passage in digestive tract
(c) Increased surface area for enzymatic action
(d) Decreased surface area for enzymatic action

95. As the plant matures, following nutrient increases :
(a) Hemicellulose
(b) Cellulose
(c) Lignin
(d) Fat

96. The following factor will not affect the chemical composition of forage crop :
(a) Soil composition
(b) Manuring and fertilization
(c) Stage of maturity of the plant
(d) Method of harvesting of the forage crop

97. For determining the digestibility of a feed by conducting digestion trial in ruminants, the optimum length of 'preliminary period' followed is :
(a) One week
(b) Two weeks
(c) Three weeks
(d) 60 days

98. When we subtract fecal energy from gross energy (GE) we will get ?

(a) GPD

(b) NE

(c) ME

(d) DE

99. In ruminants, DE is multiplied with a factor to get ME :

(a) 0.92

(b) 0.96

(c) 0.82

(d) 0.51

100. In India, energy requirement of cattle is expressed in terms of :

(a) DE

(b) ME

(c) TDN

(d) SE

101. Following mineral element is essential for wool growth in sheep :

(a) Calcium

(b) Phosphorus

(c) Manganese

(d) Sulphur

102. Quality of protein is not important in the following species :

(a) Cattle

(b) Pig

(c) Poultry

(d) Duck

103. The most important measure to assess the quality of protein in monogastric animals is :

(a) Biological value

(b) Protein equivalent

(c) NPU

(d) DCP

104. In poultry nutrition, in addition to 10EAA's another AA required is :

(a) Lysine

(b) Tryptophan

(c) Glycine

(d) Threonine

105. Urea (NPN compound) is included in the complete rations for ruminants at the rate of :

(a) 0.5%

(b) 1-2.0%

(c) 4%

(d) 5%

106. Calcium and Phosphorus ratio of 12 : 1 is followed in :

(a) Layer chicks

(b) Broiler growers

(c) Layers

(d) Broilers

107. In ruminants, following mineral is essential for synthesis of Vit B_{12} in the rumen :

(a) Se

(b) Zn

(c) Cu

(d) Co

108. Calcium content Oyster shells/shell grit is :

(a) 22%

(b) 18%

(c) 38%

(d) 42%

109. Yellow color of broiler skin is due to the addition of _____ in the diet of broilers.

(a) Carotenoids

(b) Xanthophils

(c) Flavonoids

(d) Both (a) and (b)

110. Feeding of Ionophore antibiotics in ruminants cause to increase in the production of :

(a) Acetic acid

(b) Propionic acid

(c) Citric acid

(d) Butyric acid

111. Dry matter content (%) in well prepared maize silage should be :

(a) 35

(b) 65

(c) 25

(d) 75

112. Following is the 'best quality hay' for feeding of sheep :

(a) Lucerne hay

(b) Grass hay

(c) Mixed grass hay

(d) Guinea grass hay

113. Anti-nutritional factor present in the Subabul leaves is :

(a) Mimosine

(b) Lucine

(c) Gossipol

(d) Nimbidin

114. Aflatoxin is most commonly found in the following feedstuff :

(a) Maize grain

(b) Rice bran

(c) Groundnut cake

(d) Til cake/sawflower cake

115. Collection period (no. of days) followed in conducting digestibility trial by direct invivo method in ruminants are :

(a) 21

(b) 7

(c) 2

(d) 60

116. Following is the internal indicator for determination of digestibility of a feed in cattle :

(a) Chromic oxide

(b) Lignin

(c) (a) is correct

(d) (b) is correct

117. Female co-twin of male which is sterile is called as :

(a) Bull calf

(b) Free martin

(c) Heifer

(d) Nymphomania

118. A cow apparently always in oestrus is known as :

(a) Buller

(b) Heifer

(c) Dry cow

(d) Down calves

119. The DCP% of an ideal calf starter is :

(a) 30

(b) 10

(c) 20

(d) 15

120. Highest milk producing cattle breed in India is :

(a) Ongle

(b) Sahiwall

(c) Hallikar

(d) Haryana

121. The following is known as copper colour buffalo breed :

(a) Badawari

(b) Toda

(c) Nili Ravi

(d) Godawari

122. The most critical amino acid in the diet of wool producing sheep is :

(a) Lucine

(b) Cystine

(c) Isolucine

(d) Valine

123. The cattle breed of India well known for swaichal type of gait is :

(a) Hallikar

(b) Red sindhi

(c) Gir

(d) Kankrej

124. Milking before calving is known as :

(a) Stripping

(b) Prenating

(c) Knucling

(d) Pre handling

125. The sheep breed having long tail reaches upto fetlock is :

(a) Nali

(b) Deccani

(c) Patanwadi

(d) Muzzafarnagri

126. Feeding a dry cow specially in preparation for calving is termed as :

(a) Flushing

(b) Steaming up

(c) Balanced ration

(d) Additional ration

127. The fibre obtained from Kashmiri goat is :

(a) Mohair

(b) Pelt

(c) Wool

(d) Pashmina

128. The milk queen of Goat world is :

(a) Sannen

(b) Surti

(c) Chigu

(d) Ganjam

129. Average daily feed requirement of guinea pig is :

(a) 40-60g/day

(b) 20-50g/day

(c) 10-15g/day

(d) 23-30g/day

130. The smallest pig of a litter usually last to be farrowed is called :

(a) Cad

(b) Small pig

(c) Free martin

(d) Burrow

131. In swine, the carcass length is measured from the front of 1st rib to the point of :

(a) Last rib

(b) Aitch bone

(c) 1st Lumbar vertebra

(d) 1st Coccygeal vertebrae

132. Farming method that carried out without use of artificial fertilizers and pesticides is called :

(a) Organic farming

(b) Mixed farming

(c) Diversified farming

(d) Backyard farming

133. Main feature of germ free animal is :

(a) Made free from particular pathogen

(b) Having known microflora

(c) Not having any microorganism

(d) Having all types of micro-organisms

134. First milk obtained immediately after calving is known as :

(a) Colustrum

(b) Muconium

(c) Whole milk

(d) Normal milk

135. The particular animal that is made free from particular pathogen is known as :

(a) Specific pathogen free animal

(b) Conventional animal

(c) Germ free animal

(d) Gnotobiotic animal

136. AICRP on forage crops located at :
(a) Karnal
(b) Jhansi
(c) Hyderabad
(d) Hissar

137. The acid required for good quality silage is :
(a) Acetic acid
(b) Butyric acid
(c) Propionic acid
(d) Lactic acid

138. Moisture content of chopped hay is :
(a) 19-22%
(b) 25-28%
(c) 20-25%
(d) 25-30%

139. The pH of good silage is :
(a) 7
(b) 4
(c) 6
(d) 3.5

140. The toxic substance present in subabool is :
(a) Mimosin
(b) Oxalates
(c) HCN
(d) Saponin

141. Which of the following is an example for leguminous perennial fodder variety ?
(a) Hybrid Napier
(b) Lucerne
(c) Colonial grass
(d) Para grass

142. Scientific name of Fowl is :
(a) Gallus domesticus
(b) Pavocristatus
(c) Meliagris gallopava
(d) Conturix japonica

143. Curled toe in chicks resulting from deficiency of :
(a) Nicotinic acid
(b) Riboflavin
(c) Thiamine
(d) Manganese

144. The practice of cannibalism is very common in :
(a) Poultry
(b) Cattle
(c) Sheep
(d) Horse

145. The main difference between zebu cattle and exotic cattle is :
(a) Colour
(b) Height
(c) Presence of hump
(d) Shape of horns

146. The correct order of the stages of first meiotic prophase is :
(a) Leptotene, pachytene, zygotene, diplotene

(b) Leptotene, zygotene, pachytene, diplotene

(c) Heptotene, diplotene, zygotene, pachytene

(d) Leptotene, zygotene, diplotene, pachytene

147. The individual of A blood group contains :

(a) A antigen

(b) B antigen

(c) No antigen

(d) A and B antigens

148. When a non barred cock is crossed with barred hen, it results in :

(a) Barred males and females

(b) Non-barred males and females

(c) Barred males and non barred females

(d) Barred females and non barred males

149. Sex linkage in drosophila discovered by :

(a) Bateson

(b) T. H. Morgan

(c) J. D. Watson

(d) Charles Darwin

150. The concept of linkage was put forth by :

(a) C. B. Bridges

(b) Bateson and Punnet

(c) Galton

(d) C. Correns

151. The inheritance that is passed through the X chromosome is known as :

(a) Sex-linked

(b) Sex limited

(c) Sex influenced

(d) Extra chromosomal

152. Inter allelic interaction is known as :

(a) Dominance

(b) Over dominance

(c) Epistasis

(d) Recessive

153. The heritable component of phenotypic variance is :

(a) V_A

(b) V_D

(c) V_E

(d) $V_D + V_E$

154. The word gene was coined by the Scientist :

(a) Johannsen

(b) Bateson

(c) H. J. Muller

(d) V. Nageli

155. The number of linkage groups in cattle are :

(a) 20

(b) 30

(c) 18

(d) 25

156. Differential response of same genotype in different environments is known as :

(a) Genotype X Phenotype interaction

(b) Genotype X Environment interaction

(c) Genotype X Heredity interaction

(d) Environment X Environment interaction

157. Maximum recombination frequency (%) is :

(a) 40

(b) 30

(c) 50

(d) 75

158. Genetic correlations among traits occur due to :

(a) Linkage of genes

(b) Pleotropy of genes

(c) Both (a) and (b)

(d) None of the above

159. The theory of 'acquired characters are inherited' was given by :

(a) Charles Darwin

(b) A. Weissman

(c) J. B. Lamarck

(d) R. A. Fisher

160. Regression of breeding value on phenotypic value gives :

(a) Fitness value

(b) Heritability

(c) Repeatability

(d) Genetic gain

161. Inbreeding in a population :

(a) Reduces variance

(b) Increases heritability

(c) Increases the fitness

(d) Reduces the genetic abnormalities

162. The selection aid preferred when the heritability of the trait is high in :

(a) Individual selection

(b) Family selection

(c) Sib selection

(d) Progeny testing

163. Wall eye is the characteristic feature of the following breed :

(a) Murrah

(b) Surti

(c) Pandarpuri

(d) Nili Ravi

164. Lyre horns are the characteristics of the following breed of cattle :

(a) Amrithmahal

(b) Deoni

(c) Tharparker

(d) Kankrej

165. The gene which kills an individual before birth is called as :
(a) Semi lethal
(b) Sub vital
(c) Lethal
(d) Sub lethal

166. 2n-2 chromosome complement is termed as :
(a) Nullisomic
(b) Monosomic
(c) Trisomic
(d) Tetrasomic

167. One of the following is a nonionizing radiation :
(a) X-rays
(b) UV rays
(c) Gamma rays
(d) Cosmic rays

168. Fur pelts are produced from which sheep ?
(a) Lincoln
(b) Suffolk
(c) Karakul
(d) Dorset

169. One of the following is a fine wool sheep :
(a) Ramboullet
(b) Sonadi
(c) Bannur
(d) Deccani

170. Observed superiority of out breeds and cross breeds over the parental breeds is :
(a) Heterosis
(b) Transgressive variation
(c) Fitness value
(d) Breedable value

171. General combining ability occurs due to :
(a) Additive gene action
(b) Dominance
(c) Over dominance
(d) Epistasis

172. Reciprocal recurrent selection utilizes :
(a) General combining ability
(b) Specific combining ability
(c) Both combining ability
(d) None of the above

173. Mean deviation of progeny from the parental population is known as :
(a) Selection differential
(b) Response to selection
(c) Selection intensity
(d) Realized heritability

174. The NDRI is located at :
(a) Delhi
(b) Bombay
(c) Karnal
(d) Hyderabad

175. The temperature of churning cream is :

(a) 9-11

(b) 4-6

(c) 37

(d) 20-22

176. The most variable constituent of milk is :

(a) Protein

(b) Fat

(c) Ash

(d) None of the above

177. Rossogolla is prepared by using :

(a) Channa

(b) Pindi khoa

(c) Dhap khoa

(d) None of the above

178. Ice cream without hardening process is called :

(a) Kulfi

(b) Softy

(c) Irish cream

(d) None of the above

179. Milk boiling temperature is :

(a) 100°C

(b) < 100°C

(c) > 100°C

(d) 90°C

180. Natural activity in milk is due to :

(a) Citrates

(b) Carbonates

(c) Potassium

(d) Sodium

181. The cream with highest level of fat% is :

(a) Light Cream

(b) Coffee Cream

(c) Plastic Cream

(d) Whipping Cream

182. Eggs can be commercially stored at the temperature of :

(a) 0°C

(b) + 0.5°C

(c) – 0.5°C

(d) – 1.5°C

183. In freezing dried meat the moisture level is reduced to _____ %.

(a) 50

(b) 2

(c) 65

(d) 10

184. When fat content of meat is increases, there will be reduction in :

(a) Water

(b) Protein

(c) Ash

(d) Vitamins

185. Nitrates act as flavouring agent at _____ ppm.

(a) 10

(b) 50

(c) 100

(d) 150

186. Pork is rich in vitamin :

(a) Niacin

(b) Thiamine

(c) Riboflavin

(d) B2

187. Most commonly used humectant is :

(a) NaCl

(b) Glycerol

(c) Both (a) and (b)

(d) None of the above

188. Horse meat is commonly consumed by :

(a) Europeans

(b) Africans

(c) Australians

(d) Indians

189. Rigor mortis in fowl is seen in _____ hours.

(a) 2-4

(b) 4-8

(c) 8-12

(d) 12-24

190. Green rod in egg is caused by :

(a) Proteus

(b) Pseudomonas

(c) Cladosporium

(d) Aspergillus

191. Skin in pig is called :

(a) Hide

(b) Rind

(c) Kip

(d) Slunk

192. Latest originated fat is found in this region :

(a) Subcutaneous

(b) Intramuscular

(c) Intermuscular

(d) Caul fat

193. Liquid smoke used to avoid the carcinogenic compound present in smoke is :

(a) Hydrocarbons

(b) Acetic acid

(c) Phenol

(d) Benzypyrin

194. Irradiation is ineffective in destroying :

(a) Bacteria

(b) Parasite

(c) Both (a) and (b)

(d) Endogenous enzymes

195. Callipyge lamb contains :

(a) More calpastatin

(b) Less calpastatin

(c) More calpain

(d) Less calpain

196. D value is more important in preservation method :

(a) Chilling

(b) Freezing

(c) Drying

(d) Canning

197. The unique amino acid present in elastin is :

(a) Glycin

(b) Proline

(c) Demosine

(d) Lysine

198. The shelf life of mechanically recovered meat is short due to :

(a) Excess fat

(b) Excess metal residues

(c) Microbial load

(d) All of the above

199. Meat is poor source of :

(a) Vitamin A

(b) Vitamin B complex

(c) Vitamin C

(d) Vitamin D

200. Efficiency of pasteurization is measured by :

(a) pH Test

(b) Lipase Test

(c) Amylase Test

(d) Phosphatase Test

SPACE FOR ROUGH WORK