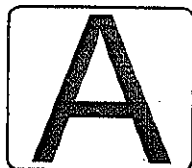


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Test Booklet Series

T. B. C. : VS - 2 - 17



TEST BOOKLET

Serial No. _____

VETERINARY ASSISTANT SURGEON

2077

PAPER - II

(Animal Science)

Time Allowed : 2½ Hours

Maximum Marks : 400

: INSTRUCTIONS TO CANDIDATES :

1. IMMEDIATELY AFTER 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 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 alongside. **DO NOT** write *anything else* on the Test Booklet.
4. YOU ARE REQUIRED TO FILL UP & DARKEN ROLL NO., TEST BOOKLET / QUESTION BOOKLET SERIES IN THE ANSWER SHEETS AS WELL AS FILL UP TEST BOOKLET / QUESTION BOOKLET SERIES AND SERIAL NO. AND ANSWER SHEET SERIAL NO. IN THE ATTENDANCE SHEETS CAREFULLY. WRONGLY FILLED UP ANSWER SHEETS ARE LIABLE FOR REJECTION AT THE RISK OF THE CANDIDATE.
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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SEAL

1. Panting is an important mechanism of thermoregulation in :
 - (A) Cattle
 - (B) Horse
 - (C) Sheep
 - (D) Camel
2. The enzyme in saliva that acts on starch is :
 - (A) β -Amylase
 - (B) α -Amylase
 - (C) Both (A) and (B)
 - (D) None of these
3. For preparing good quality silage, the ideal DM content of green fodder is :
 - (A) 30 – 35%
 - (B) 60 – 65%
 - (C) 20 – 25%
 - (D) 10 – 15%
4. The development or degeneration of ovarian follicles is regulated by :
 - (A) Estrogen and progesterone ratio
 - (B) Androgen and estrogen ratio
 - (C) FSH and LH ratio
 - (D) Progesterone and LH ratio
5. Which among the following is an induced ovulator ?
 - (A) Sheep
 - (B) Cattle
 - (C) Horse
 - (D) Rabbit
6. Which of the following is a hormone of the gastrointestinal tract ?
 - (A) Cholecystokinin
 - (B) Oxytocin
 - (C) Somatotropin
 - (D) Vasopressin
7. The source of energy for the spermatozoa in semen is :
 - (A) Fructose
 - (B) Sucrose
 - (C) Galactose
 - (D) None of these
8. Which of the following is **not** a characteristic of good quality silage ?
 - (A) pH : 3.5 – 4.5
 - (B) Lactic acid : 1 – 2%
 - (C) Ammonical nitrogen : 10 – 15%
 - (D) High butyric acid content
9. Normal presynaptic inhibitory neurotransmitter is :
 - (A) GABA
 - (B) Serotonin
 - (C) Acetylcholine
 - (D) Epinephrine

10. Exchange of the nutrients and gases takes place at :
 - (A) Arteries
 - (B) Arterioles
 - (C) Capillaries
 - (D) Venules
11. Chemicals produced in inflamed tissues attract :
 - (A) Lymphocytes
 - (B) Basophils
 - (C) Monocytes
 - (D) All of these
12. Shift to right is a term related to :
 - (A) Eosinophils
 - (B) Neutrophils
 - (C) Basophils
 - (D) Monocytes
13. The antinutritional factor present in raw soybeans is :
 - (A) Trypsin inhibitors
 - (B) Lectins
 - (C) Saponins
 - (D) All of these
14. Animals adapted to high altitude exhibit :
 - (A) Polycythaemia
 - (B) Increased rate of pulmonary gas exchange
 - (C) Increase in hemoglobin concentration
 - (D) All of these
15. Hormone required for wool follicle growth in sheep is :
 - (A) Growth hormone
 - (B) Thyroxine
 - (C) Cortisol
 - (D) Prostaglandin
16. The vitamin that acts as hormone is :
 - (A) Vitamin A
 - (B) Vitamin C
 - (C) Vitamin E
 - (D) Vitamin D
17. Which of the following is **not** a perennial fodder variety ?
 - (A) Maize
 - (B) NB₂₁
 - (C) Co-1
 - (D) Napier grass
18. An example for a major mineral is :
 - (A) Calcium
 - (B) Iron
 - (C) Selenium
 - (D) Copper

19. Organic matter is equal to :
 (A) $100 - \text{DM}\%$
 (B) $100 - \text{Moisture}\%$
 (C) Both (A) and (B)
 (D) $\text{DM} - \text{TA}$
20. As the plant matures, its digestibility is decreased due to :
 (A) Increase in Lignin and CF content
 (B) Decrease in CP content
 (C) Decrease in total ash content
 (D) Both (A) and (B)
21. Milk is deficient in :
 (A) Vitamin C
 (B) Vitamin A
 (C) Vitamin D
 (D) Calcium
22. The per capita availability of milk in India during 2010-11 was :
 (A) 125 g
 (B) 280 g
 (C) 350 g
 (D) 500 g
23. The highest milk producing state in India is :
 (A) AP
 (B) UP
 (C) Punjab
 (D) MP
24. Milk is pasteurized at :
 (A) 63°C for 30 m
 (B) 63°C for 30 s
 (C) 72°C for 30 m
 (D) Both (A) and (C)
25. The pH of fresh milk is :
 (A) 6.5
 (B) 3.6
 (C) 8.0
 (D) 4.0
26. Pasteurization of milk increases the losses of the vitamins :
 (A) B_1 & C
 (B) A & D
 (C) E
 (D) K
27. The bulk milk coolers reduce the temperature of milk to :
 (A) $< 5^{\circ}\text{C}$
 (B) $< 10^{\circ}\text{C}$
 (C) $< 15^{\circ}\text{C}$
 (D) $< 25^{\circ}\text{C}$

28. The minimum standards set by PFA (1976) for buffalo milk is :
- (A) Fat : 3 – 4% & SNF : 9.0%
 - (B) Fat : 5 – 6% & SNF : 9.0%
 - (C) Fat : 7 – 8% & SNF : 9.0%
 - (D) Fat : 9 – 10% & SNF : 9.0%
29. In a poor quality raw milk, the SPC/ml will be :
- (A) > 50,00,000
 - (B) > 2,00,000
 - (C) 2,00,000 to 10,00,000
 - (D) 10,00,000 to 50,00,000
30. The lightest constituent of milk is :
- (A) Fat
 - (B) Protein
 - (C) Ash
 - (D) Lactose
31. Which of the following milk constituent is least variable ?
- (A) Fat
 - (B) Protein
 - (C) Ash
 - (D) Lactose
32. The halogen commonly used to sanitize carcasses, abattoir, equipments etc is :
- (A) Sodium hypochlorite
 - (B) CTAB
 - (C) Betain
 - (D) Phosphoric acid
33. The higher the Biological Oxidation Demand (BOD), the greater the :
- (A) Inorganic matter content
 - (B) Organic matter content
 - (C) Both (A) and (B)
 - (D) None of these
34. For safe disposal of dead animal carcasses, the minimum depth of the burial pit is :
- (A) 2 meters
 - (B) 4 meters
 - (C) 6 meters
 - (D) 8 meters
35. Which of the following is not a notifiable disease ?
- (A) Anthrax
 - (B) BQ
 - (C) FMD
 - (D) Cystecercosis
36. The ideal age for slaughter of male buffalo calves for meat production is :
- (A) > 2 years
 - (B) 1.5 to 2 years
 - (C) < 1 year
 - (D) > 3 years

37. The dressing percentage is highest in :
 (A) Cattle and Buffaloes
 (B) Sheeps
 (C) Goats
 (D) Crossbred and exotic pigs
38. India is a major exporter of :
 (A) Poultry meat
 (B) Mutton
 (C) Chevron
 (D) Buffalo meat
39. An abattoir refers to :
 (A) Livestock receiving area
 (B) Livestock resting area
 (C) Slaughter hall
 (D) Slaughter house
40. Identify the wrong statement :
 (A) Animals should not be offered water 12 hours before slaughter
 (B) Animals should be rested for 24 hours before slaughter
 (C) Animals should not be fed for at least 12 hours before slaughter
 (D) Ante mortem examination should be conducted 10-14 h before slaughter
41. In chemical stunning the gas commonly used is :
 (A) CO_2
 (B) CO
 (C) Methane
 (D) H_2S
42. Gelatin and glue are obtained from :
 (A) Bones
 (B) Intestines
 (C) Blood
 (D) Skin
43. The non-edible uses of intestines do not include :
 (A) Cat-gut
 (B) Racquet strings
 (C) Musical instrument strings
 (D) Casings
44. Ketosis in sheep is common during :
 (A) Lactation
 (B) Active growth
 (C) Pregnancy
 (D) None of these
45. The average conversion of raw blood to blood meal is :
 (A) 5 : 1
 (B) 10 : 1
 (C) 15 : 1
 (D) 2 : 1
46. The temperature in the chilling room should be maintained between :
 (A) -1 to 3°C
 (B) 2 to 3°C
 (C) 4 to 5°C
 (D) 5 to 7°C

47. If sheep pox is suspected during PM examination then :
- (A) Whole carcass is condemned
 - (B) The unaffected part is passed
 - (C) The unaffected part is conditionally passed
 - (D) None of these
48. The average specific gravity of cow milk is :
- (A) 1.420 – 1.560
 - (B) 1.028 – 1.030
 - (C) 1.112 – 1.214
 - (D) 1.055 – 1.062
49. Loin eye area is closely related to the quantity of :
- (A) Ash
 - (B) Fat
 - (C) Lean
 - (D) Marbling
50. Large slaughter houses, handling 200 livestock units/day require :
- (A) 1.0 acre
 - (B) 1 – 2 acres
 - (C) 0.5 acre
 - (D) 2 – 4 acres
51. Vacuum packaging is not recommended for :
- (A) Buffalo meat
 - (B) Beef
 - (C) Mutton and pork
 - (D) None of these
52. The sterilized milk should be fit for human consumption for at least :
- (A) 1 week
 - (B) 2 weeks
 - (C) 3 weeks
 - (D) None of these
53. After pasteurization milk is cooled immediately to a temperature of :
- (A) 1°C
 - (B) 2°C
 - (C) 3°C
 - (D) 4°C
54. The net production of ATPs per mole of glucose in glycolysis is :
- (A) 1
 - (B) 2
 - (C) 6
 - (D) 8
55. Efficiency of pasteurization can be tested by :
- (A) Turbidity test
 - (B) Bouldin test
 - (C) Soxhlet test
 - (D) Phosphatase test

56. Fresh meat can be preserved for 5 – 7 days at a temperature of :
- (A) 4°C
 - (B) 8°C
 - (C) – 4°C
 - (D) 12°C
57. The temperature in scalding tank is maintained at :
- (A) 80°C
 - (B) 75°C
 - (C) 85°C
 - (D) 60°C
58. The water required for one buffalo/ cattle in a slaughter house is :
- (A) 1000 litres
 - (B) 100 litres
 - (C) 500 litres
 - (D) None of these
59. In our country, the highest annual growth rate is observed in the production of :
- (A) Broiler meat
 - (B) Mutton
 - (C) Beef
 - (D) Pork
60. The major pork producing and consuming country in the world is :
- (A) USA
 - (B) EU
 - (C) China
 - (D) Russia
61. An ionophore antibiotic used as feed additive is :
- (A) Monensin
 - (B) Chlortetracycline
 - (C) Zinc Bacitracin
 - (D) Penicillin
62. The diploid number of chromosomes in cattle is :
- (A) 60
 - (B) 46
 - (C) 38
 - (D) 62
63. The cell theory was proposed by :
- (A) Robert Hooke
 - (B) Dutrochet
 - (C) Weismann
 - (D) Schwan and Virchow
64. The discovery of double helix model of DNA laid the foundation of a new branch of genetics called :
- (A) Molecular genetics
 - (B) Biochemical genetics
 - (C) Cytogenetics
 - (D) Classical genetics

65. The genetic parameter most commonly used in animal breeding :
- (A) Heritability
 - (B) Correlation
 - (C) Repeatability
 - (D) All of these
66. In a dairy cow, the major source of glucose for lactose synthesis :
- (A) Acetate
 - (B) Propionate
 - (C) Butyrate
 - (D) Isovaleric acid
67. Chromosome number is halved in which of the following stages of meiosis ?
- (A) Anaphase – I
 - (B) Anaphase – II
 - (C) Metaphase – I
 - (D) Metaphase – II
68. The main purpose of selection in a population is to :
- (A) Increase frequency of desired genes
 - (B) Decrease heterozygosity
 - (C) Increase frequency of lethal genes
 - (D) None of these
69. Inbreeding coefficient is a measure of :
- (A) Homozygosity
 - (B) Heterozygosity
 - (C) Hybrid vigour
 - (D) None of these
70. Progeny test is useful for selection of :
- (A) Sex limited trait
 - (B) Sex influenced trait
 - (C) Qualitative trait
 - (D) Sex linked trait
71. The metal present in the enzyme carbonic anhydrase is :
- (A) Mn
 - (B) Cu
 - (C) Zn
 - (D) None of these
72. A commonly used chemical to treat cases of HCN poisoning is :
- (A) Sodium hydroxide
 - (B) Sodium carbonate
 - (C) Sodium thiosulphate
 - (D) None of these

73. The sheep and goat breeds native to Odisha is :
 (A) Ganjam and Balangir
 (B) Bellary and Beetal
 (C) Ganjam and Bengal
 (D) None of these
74. The carpet wool yielding sheep developed by CSWRI is :
 (A) Bharat Merino
 (B) Avivastra
 (C) Avikalin
 (D) Hissardale
75. The finest quality skin for leather industry is obtained from :
 (A) Ganjam
 (B) Black Bengal
 (C) Marwari
 (D) Assam hill
76. The dressing percentage in sheep and goats is :
 (A) 70%
 (B) 80%
 (C) 40 – 45%
 (D) 60%
77. Gestation period in goat is :
 (A) 150 days
 (B) 114 days
 (C) 90 days
 (D) 285 days
78. α -tocopherol is :
 (A) Water soluble anti-oxidant
 (B) Anti rachitic factor
 (C) Fat soluble anti-oxidant
 (D) All of these
79. The grease/fat content is high in :
 (A) Carpet wool
 (B) Coarse wool
 (C) Fine wool
 (D) Very fine wool
80. Medicines given through rectal route are :
 (A) Electuary
 (B) Enemata
 (C) Bolus
 (D) Pessary
81. Bull used for breeding purpose is known as :
 (A) Scrub bull
 (B) Stud bull
 (C) Bullock
 (D) Steer
82. Removal of the unproductive animals from a herd is called :
 (A) Castration
 (B) Culling
 (C) Dipping
 (D) Shearing

83. In a calf well fed on hay and calf starter, the rumen is fully functional at:
- (A) 1 year
 - (B) 3–4 months
 - (C) 6–8 months
 - (D) None of these
84. Milking of dairy animals should be completed in:
- (A) 5–7 minutes
 - (B) 15–17 minutes
 - (C) 2–3 minutes
 - (D) No time limit
85. The housing system most suitable to Indian conditions is:
- (A) Loose housing
 - (B) Conventional system
 - (C) Free range
 - (D) All of these
86. Weaning of piglets is done at the age of:
- (A) 2 weeks
 - (B) 4 weeks
 - (C) 6 weeks
 - (D) 8 weeks
87. Animals should always be approached from their:
- (A) Rear and Right side
 - (B) Front and left side
 - (C) Rear and Left side
 - (D) Right side
88. The exotic pig most popularly used for cross breeding in India is:
- (A) Tamworth
 - (B) Duroc
 - (C) Berkshire
 - (D) Large White Yorkshire
89. Ear notching is a common method of identification in:
- (A) Pigs
 - (B) Sheeps
 - (C) Rabbits
 - (D) None of these
90. The number of needle teeth in piglets is:
- (A) 3 pairs
 - (B) 2 pairs
 - (C) 4 pairs
 - (D) 6 pairs
91. Sex ratio followed in swine breeding stock is:
- (A) 1 : 50
 - (B) 1 : 20
 - (C) 1 : 5
 - (D) 1 : 30

92. Which of the following is not a dual purpose cattle breed ?
- (A) Hariana
 - (B) Ongole
 - (C) Tharparkar
 - (D) Amritmahal
93. In poultry, gross energy intake – excreta energy is :
- (A) DE
 - (B) ME
 - (C) TME
 - (D) NE
94. Which of the following belongs to the sub-order Perissodactyla ?
- (A) Cattle
 - (B) Sheep and goats
 - (C) Swine
 - (D) Horse
95. A full load of cattle in broad gauge railway wagon consists of :
- (A) 8 adult cows with their suckling calves
 - (B) 6 adult cows with their suckling calves
 - (C) 4 adult cows with their suckling calves
 - (D) None of these
96. The annual culling (%) recommended in sheep breeding is :
- (A) 2 – 5
 - (B) 10 – 15
 - (C) 15 – 20
 - (D) 20 – 25%
97. The insemination of the non-descript female buffalo with Murrah semen is :
- (A) Cross breeding
 - (B) Line breeding
 - (C) Grading up
 - (D) Out crossing
98. The hinny, catallo, zebroid are the examples of :
- (A) Out breeding
 - (B) Line breeding
 - (C) Hybridization
 - (D) None of these
99. Milk production is a :
- (A) Sex influenced characteristic
 - (B) Sex linked characteristic
 - (C) Sex limited characteristic
 - (D) None of these

100. The probable producing ability of an individual in its life time can be estimated from :
- Heritability
 - Repeatability
 - Gene frequency
 - All of these
101. Rate of genetic change of a population due to selection is determined by :
- Heritability
 - Selection differential
 - Generation interval
 - All of these
102. The most widely adopted selection method for genetic improvement is :
- Tandem method
 - Independent culling level method
 - Selection index method
 - Family selection
103. The approximate power developed by a bullock in terms of Horse Power is :
- 1.0
 - 0.35
 - 0.74
 - 0.45
104. Which of the following statements is wrong ?
- Crossbred bullocks can be put to work at a young age than local bullocks
 - The absence of hump reduces the efficiency of crossbred bullock
 - Crossbred bullocks are more susceptible to stress than local bullocks
 - Crossbred bullocks have greater stamina and capability for work than local bullocks
105. One pair of good bullocks is considered to be sufficient to carry out cultivation activities on a land holding of :
- 1 hectare
 - 5 hectares
 - 10 hectares
 - None of these
106. An average sized mature castrated buffalo could plough :
- 0.25 ha / day
 - 2.5 ha / day
 - 3.0 ha / day
 - 1.0 ha / day

107. The horse breed used as pack animal in the hills is :
 (A) Bhutia
 (B) Manipuri
 (C) Both (A) and (B)
 (D) None of these
108. The per capita egg consumption / annum according to ICMR should be :
 (A) 180
 (B) 35
 (C) 90
 (D) 150
109. The most popular meat type duck is :
 (A) White Peckin
 (B) Khaki Campbell
 (C) Indian Runner
 (D) Muscovi
110. The inactive form of an enzyme is :
 (A) Apoenzyme
 (B) Holoenzyme
 (C) Zymogen
 (D) Coenzyme
111. Which of the following is not an antioxidant ?
 (A) Vitamin A
 (B) β carotene
 (C) Vitamin C
 (D) Vitamin E
112. The number of β -oxidation required for oxidation of one molecule of fatty acid with 18 carbons is :
 (A) 6
 (B) 8
 (C) 4
 (D) 10
113. Inulin, a polymer of D-fructose, is used as :
 (A) Probiotic
 (B) Antibiotic
 (C) Prebiotic
 (D) Synbiotic
114. The active form of Vitamin D is :
 (A) Cholecalciferol
 (B) 25-OH Cholecalciferol
 (C) $1, 25(\text{OH})_2$ cholecalciferol
 (D) None of these
115. The dry matter intake of lactating goats (% of B. wt) is :
 (A) 4 – 6
 (B) 2 – 3
 (C) 6 – 8
 (D) 1 – 2

116. The metal ion involved in energy storage and transfer process is :
- (A) Mg
 - (B) Fe
 - (C) Cu
 - (D) CO
117. HMP shunt is required to generate :
- (A) NADPH for fat synthesis
 - (B) NADPH as energy source
 - (C) Both (A) and (B)
 - (D) None of these
118. Cellulose is a polymer of :
- (A) β D glucose
 - (B) α D glucose
 - (C) Pectins
 - (D) Mannose
119. The storage polysaccharide in animals is :
- (A) Chitin
 - (B) Glycogen
 - (C) Starch
 - (D) Cellulose
120. The sulfur containing amino acid present in wool is :
- (A) Cysteine
 - (B) Glycine
 - (C) Lysine
 - (D) Arginine
121. The codon that initiates protein synthesis is :
- (A) AUG
 - (B) UAA
 - (C) UAG
 - (D) UGA
122. Which of the following component of animal body is least variable ?
- (A) Glycogen
 - (B) Protein
 - (C) Fat
 - (D) Water
123. IGFR1 located in Jhansi is associated with :
- (A) Forage crops
 - (B) Research in Animal Nutrition
 - (C) Research in Animal reproduction
 - (D) None of these
124. Amprolium and Monensin in poultry feeding are used as :
- (A) Enzymes
 - (B) Antibiotics
 - (C) Coccidiostats
 - (D) Probiotics

125. Vitamin B₁₂ plays a role in the formation and synthesis of :
 (A) Carbohydrates
 (B) Lipids
 (C) Proteins
 (D) Nucleic acids
126. Urea synthesis occurs in :
 (A) Kidney
 (B) Liver
 (C) Brain
 (D) Intestines
127. The lactate produced under anaerobic glycolysis in the muscle is converted to glucose through :
 (A) TCA cycle
 (B) Glycolysis
 (C) EMP path way
 (D) Cori cycle
128. Electron Transport Chain takes place in which part of mitochondria ?
 (A) Outer membrane
 (B) Inner membrane
 (C) Matrix
 (D) None of these
129. The chemicals used for fumigation of incubators :
 (A) Formalin
 (B) Potassium permanganate
 (C) Both (A) and (B)
 (D) None of these
130. ATP was discovered by :
 (A) Fritz Lipman
 (B) Claude Albert
 (C) Andrew Fielding
 (D) Arthur Kornberg
131. Which of the following is not a steroid hormone ?
 (A) Estrogen
 (B) Progesterone
 (C) Cortisone
 (D) Oxytocin
132. Still births, birth of hairless offsprings, reproduction failure etc. indicate the deficiency of :
 (A) Growth hormone
 (B) Adrenaline
 (C) Thyroxine
 (D) Estrogen
133. Increase in serum creatinine level indicates the damage to :
 (A) Kidney
 (B) Liver
 (C) Brain
 (D) Heart

134. Hormone regulated by positive feedback is :
- (A) Thyroxine
 - (B) Growth hormone
 - (C) Oxytocin
 - (D) Prolactin
135. Establishment test order behaviour is seen in :
- (A) Cattle
 - (B) Piglets
 - (C) Sheep
 - (D) Goat
136. Which of the following is not a somatic sensation ?
- (A) Touch
 - (B) Pressure
 - (C) Vision
 - (D) None of these
137. The hormone secreted by corpus luteum that maintains pregnancy is :
- (A) Progesterone
 - (B) Estrogen
 - (C) Prostaglandin
 - (D) None of these
138. The mineral and vitamin essential for blood clotting are :
- (A) Vitamin K and P
 - (B) Vitamin K and Se
 - (C) Vitamin K and Ca
 - (D) Vitamin K and Zn
139. The predominant galactopoietic hormone in ruminants is :
- (A) Oxytocin
 - (B) Growth hormone
 - (C) Prolactin
 - (D) All of these
140. Depression of bone marrow causes :
- (A) Hemolytic anemia
 - (B) Microcytic anemia
 - (C) Megaloblastic anemia
 - (D) Aplastic anemia
141. The straw colored fluid obtained when blood coagulates is known as :
- (A) Plasma
 - (B) Serum
 - (C) Both (A) and (B)
 - (D) None of these
142. Ovulation is under the influence of the hormone :
- (A) FSH
 - (B) LH
 - (C) Prostaglandins
 - (D) Progesterone

143. Interferon, an antiviral compound, is produced by :
- Eosinophils
 - Basophils
 - Neutrophils
 - Lymphocytes
144. The aquatic weed that is used as livestock feed is :
- Azolla
 - Algae
 - Water hyacinth
 - None of these
145. The exotic cattle breed of choice suitable for Indian conditions is :
- Guernsey
 - Holstein-Friesian
 - Jersey
 - None of these
146. The mycotoxin producing fungus is :
- Aspergillus
 - Bacillus
 - Saccharomyces
 - All of these
147. The B-Vitamin that can be synthesized from Tryptophan is :
- Folic acid
 - B-1
 - Niacin
 - Biotin
148. RDP and RUP is a protein evaluation method for :
- Cow
 - Pigs
 - Poultry
 - Rabbits
149. Mimosine toxicity in monogastric animals can be reduced by feeding :
- FeSO_4
 - CuSO_4
 - ZnSO_4
 - MnSO_4
150. The highest number of tanneries is present in the State of :
- AP
 - MP
 - Rajasthan
 - Tamilnadu
151. The percentage of digested and absorbed protein that is retained in the body is :
- Protein efficiency ratio
 - Gross protein value
 - Biological value
 - Chemical score
152. The heat increment will be least for :
- Paddy straw
 - Groundnut cake
 - Sunflower oil
 - Maize cobs

153. Silage is preserving green fodder :
 (A) By aerobic fermentation
 (B) By anerobic fermentation
 (C) By artificial drying
 (D) By drying in the shade
154. In India, the energy content of feeds and the energy requirements of ruminants are most commonly expressed as :
 (A) TDN
 (B) ME
 (C) NE
 (D) GE
155. The parathyroid hormone :
 (A) Increases Ca deposition in bones
 (B) Increases Ca mobilization from bones
 (C) Increases renal excretion of Ca
 (D) Has no effect on Ca homeostasis
156. The biological value of microbial protein is :
 (A) 25%
 (B) 80%
 (C) 45%
 (D) None of these
157. Molasses can be used in cattle feeds at the rate of :
 (A) 5 to 10%
 (B) 20 to 30%
 (C) 30 to 40%
 (D) 40 to 50%
158. The most limiting amino acids in practical diets of poultry and pigs are :
 (A) Alanine proline
 (B) Lysine and methionine
 (C) Glutamic acid and hydroxy proline
 (D) Histidine and glycine
159. The selection of individuals based on performance of their ancestors is known as :
 (A) Individual selection
 (B) Family selection
 (C) Pedigree selection
 (D) Progeny testing
160. As per Indian Standards, the maintenance DCP requirement of cattle / $\text{kg}^{0.75}$ is :
 (A) 2.84 g
 (B) 5.02 g
 (C) 7.52 g
 (D) 6.0 g
161. Anand pattern of dairy cooperatives work on :
 (A) 2 tier
 (B) 3 tier
 (C) 5 tier
 (D) None of these

162. A combination of crop production and livestock production is :
 (A) Diversified farming
 (B) Mixed farming
 (C) Specialized farming
 (D) None of these
163. Urea treatment of paddy straw is an example for :
 (A) Exhibition
 (B) Field trip
 (C) Method demonstration
 (D) Result demonstration
164. Front line demonstration is one of the activities of :
 (A) Co-operative Societies
 (B) Krishi Vigyan Kendra
 (C) Panchayat Samiti
 (D) None of these
165. Cotton seed contains the anti-nutritional factor :
 (A) Ricin
 (B) Tannin
 (C) Saponin
 (D) Gossypol
166. The quarantine period followed for most of the diseases is :
 (A) 45 days
 (B) 60 days
 (C) 30 days
 (D) 90 days
167. Rabbits practice coprophagy as early as :
 (A) 1 week
 (B) 2 – 3 weeks
 (C) 5 – 10 weeks
 (D) None of these
168. The most suitable method for identification of cattle and buffaloes is :
 (A) Branding
 (B) Tattooing
 (C) Tagging
 (D) None of these
169. The decision to apply an innovation/ technology and to use it continuously is known as :
 (A) Knowledge
 (B) Confirmation
 (C) Adoption
 (D) Persuasion
170. The training given to subject matter specialists to update professional competence is known as :
 (A) Induction training
 (B) In-service training
 (C) Refresher training
 (D) Modular training
171. Education is the process of bringing about desirable changes in human behaviour through changes in :
 (A) Knowledge
 (B) Attitudes
 (C) Skills
 (D) All of these

172. Information contained about a particular topic in a single sheet of paper is :
- (A) Bulletin
 - (B) Leaflet
 - (C) Pamphlet
 - (D) All of these
173. The powerful force in learning process is :
- (A) Knowledge
 - (B) Training Methods
 - (C) Audio visual aids
 - (D) Motivation
174. Posters, charts, chalk boards, photographs, specimens etc. are the examples for :
- (A) Projected aids
 - (B) Non-projected aids
 - (C) Audio visual aids
 - (D) None of these
175. In ruminants onset of estrus is mostly influenced by :
- (A) Age
 - (B) Body weight
 - (C) Both (A) and (B)
 - (D) None of these
176. Which of the following is not a characteristic of balanced ration ?
- (A) Palatable
 - (B) Laxative
 - (C) Meet DM requirements
 - (D) Less digestible
177. As per thumb rules of feeding, buffaloes are fed 1.0 kg concentrate mixture for every :
- (A) 2 kg of milk
 - (B) 2.5 kg of milk
 - (C) 1 kg of milk
 - (D) 0.5 kg of milk
178. 1 kg TDN is equal to :
- (A) 4.4 Mcal DE
 - (B) 4.4 Mcal ME
 - (C) 4.4 Mcal NE
 - (D) 4.4 Mcal GE
179. The end product of carbohydrate fermentation in rumen is :
- (A) Pyruvic acid
 - (B) VFA
 - (C) Lactic acid
 - (D) Glucose
180. The quantity of colostrum (kg) required by a calf weighing 30 kg is :
- (A) 3.0
 - (B) 2.0
 - (C) 4.0
 - (D) 5.0
181. The type I concentrate mixture as per BIS specification should contain :
- (A) 15% CP
 - (B) 18% CP
 - (C) 20% CP
 - (D) 22% CP

182. The highest wool producing country in the world is :
- (A) India
 - (B) UK
 - (C) USA
 - (D) Australia
183. In grazing cattle and buffaloes reproduction failure is due to the deficiency of :
- (A) Phosphorus
 - (B) Vitamin A
 - (C) Zinc
 - (D) Vitamin E
184. 80% of foetus growth occurs during :
- (A) First trimester of pregnancy
 - (B) Second trimester of pregnancy
 - (C) Third trimester of pregnancy
 - (D) None of these
185. Which of the following contains more NPN ?
- (A) Hay
 - (B) Straw
 - (C) Silage
 - (D) Cereal grains
186. Urea is poorly utilized when it is added to :
- (A) Concentrate mixture with more than 18% CP
 - (B) Complete diets with more than 13% CP
 - (C) Concentrate mixtures with 15% CP
 - (D) Both (A) and (B) are correct
187. In a cow's diet containing 10 kg dry matter, the quantity of urea that can be included is :
- (A) 100 g
 - (B) 200 g
 - (C) 500 g
 - (D) None of these
188. The analytical methodology through which a team of experts collects information and provides solutions to farmers is :
- (A) Participatory Rural Appraisal
 - (B) Involvement Rural Appraisal
 - (C) Rapid Rural Appraisal
 - (D) Both (A) and (C)
189. The analytical methodology in which farmers and experts are involved to collect information and provide solutions to farmers is :
- (A) Participatory Rural Appraisal
 - (B) Involvement Rural Appraisal
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 - (D) Both (A) and (C)
190. Technologies related to livestock development are :
- (A) Less productive and cheap
 - (B) Time consuming, costly and poorly proven
 - (C) Less adopted
 - (D) None of these

191. In poultry the peak egg production is attained at :
 (A) 15 – 20 weeks
 (B) 30 – 32 weeks
 (C) 50 – 52 weeks
 (D) 70 – 72 weeks
192. The most widely used lab animal in research is :
 (A) Mice
 (B) Rats
 (C) Rabbits
 (D) Monkeys
193. Which of the following is not an indigenous breed of Odisha ?
 (A) Binjharपुरी
 (B) Chilika
 (C) Paralakhemundi
 (D) Kangayam
194. Kalyani, the integrated livestock development project in Odisha is being implemented in association with :
 (A) BAIF
 (B) NABARD
 (C) Local banks
 (D) Co-operative societies
195. The agency that organizes training at field level on behalf of Animal Husbandry Department in Odisha is :
 (A) SMILE
 (B) NABARD
 (C) ATMA
 (D) ARD Department
196. The milk produced (in million tonnes) in India during 2011-12 was :
 (A) 140
 (B) 128
 (C) 135
 (D) 150
197. A central scheme funded by World Bank that has been launched in 2012-13 to increase milk production in the country is :
 (A) Cattle Development Project
 (B) Milk Improvement Project
 (C) National Dairy Plan
 (D) None of these
198. The ICT tools used in extension are :
 (A) Comcorders
 (B) CD-ROMS, Pen drives
 (C) Computers
 (D) All of these
199. Vitamin C is essential in the diet of :
 (A) Rats
 (B) Mice
 (C) Guinea pig
 (D) Cows
200. The compounds or chemicals that are capable of enhancing defense mechanism of livestock are known as :
 (A) Probiotics
 (B) Prebiotics
 (C) Antibiotics
 (D) Immunomodulators

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