

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

COMBINED COMPETITIVE (PRELIMINARY) EXAMINATION, 2013

Serial No.

**ANIMAL HUSBANDRY &
VETERINARY SCIENCE**
Code No. 02



Time Allowed : Two Hours

Maximum Marks : 300

INSTRUCTIONS

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.
2. ENCODE CLEARLY THE TEST BOOKLET SERIES **A, B, C OR D** AS THE CASE MAY BE IN THE APPROPRIATE PLACE IN THE RESPONSE SHEET.
3. You have to enter your Roll Number on this Test Booklet in the Box provided alongside.
DO NOT write anything else on the Test Booklet.
4. This Booklet contains 120 items (questions). Each item comprises *four* responses (answers). You will select *one* response which you want to mark on the Response Sheet. In case you feel that there is more than one correct response, mark the response which you consider the best. In any case, choose **ONLY ONE** response for each item.
5. In case you find any discrepancy in this test booklet in any question(s) or the Responses, a written representation explaining the details of such alleged discrepancy, be submitted within three days, indicating the Question No(s) and the Test Booklet Series, in which the discrepancy is alleged. Representation not received within time shall not be entertained at all.
6. You have to mark all your responses **ONLY** on the separate Response Sheet provided. *See directions in the Response Sheet.*
7. All items carry equal marks. Attempt **ALL** items. Your total marks will depend only on the number of correct responses marked by you in the Response Sheet.
8. Before you proceed to mark in the Response Sheet the response to various items in the Test Booklet, you have to fill in some particulars in the Response Sheet as per instructions sent to you with your Admit Card and Instructions.
9. While writing Centre, Subject and Roll No. on the top of the Response Sheet in appropriate boxes use **“ONLY BALL POINT PEN”**.
10. After you have completed filling in all your responses on the Response Sheet and the examination has concluded, you should hand over to the Invigilator only the Response Sheet. You are permitted to take away with you the Test Booklet.

Your Roll No.

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ROUGH WORK

1. Gestation period in goat is :
 (A) 148-156 days (B) 120-126 days
 (C) 175-180 days (D) 90-95 days
2. Which of the following is a dual purpose cattle breed ?
 (A) Kankrej (B) Gir
 (C) Kangayam (D) Khillar
3. Genetically two traits are related due to :
 (A) Multiple alleles (B) Pleiotropism
 (C) Polygenes (D) All the above
4. Which of the following is a water soluble vitamin ?
 (A) A (B) B
 (C) D (D) K
5. FSH and LH hormones are released from the following organ :
 (A) Adrenal cortex (B) Ovary
 (C) Anterior pituitary (D) Posterior pituitary
6. The amount of heat resulting from the complete oxidation of unit weight of a food is known as :
 (A) Digestible energy (B) Gross energy
 (C) Net energy (D) Metabolizable energy
7. Adult female goat is known as :
 (A) Doe (B) Ewe
 (C) Heifer (D) Steer
8. Vitamin B₁₂ is also called as :
 (A) Thiamine (B) Cyanocobalamin
 (C) Riboflavin (D) Cobalamin
9. Yellow coloration of cow milk is due to :
 (A) Xanthene (B) Carotene
 (C) Flourescein (D) Casein
10. Skim milk contains :
 (A) Less than 0.1% fat (B) 1% fat
 (C) More than 30% protein (D) Maximum of 5% SNF
11. Which of the following vitamins is normally synthesized in poultry and hence not considered a required normal dietary nutrient ?
 (A) Vit. K (B) Vit. C
 (C) Vit. A (D) Vit. E

12. About 50 per cent of total meat in India is produced by :
- (A) Ruminante (B) Poultry
(C) Piggery (D) Fishery
13. Percentage of nitrogen in crude protein is about :
- (A) 12 (B) 22
(C) 26 (D) 16
14. Chevon is the name of meat of :
- (A) Sheep (B) Goat
(C) Cow (D) Pig
15. With reference to genes for milk yield, consider the following :
- (a) Only females carry the genes
(b) It is sex influenced
- Which of the statements given above is/are correct ?
- (A) (a) only (B) (b) only
(C) Both (a) and (b) (D) None of them
16. Organisms causing Babesiosis live in :
- (A) WBCs (B) Platelets
(C) RBCs (D) All the above
17. Consider the following statements :
- (a) India has about 75% of world's buffalo population
(b) India has about 50% of world's cattle population
(c) India has about 10% of world's sheep population
- Which of the statements given above is/are correct ?
- (A) (a) only (B) (b) only
(C) (c) only (D) None of them
18. The optimum dry period recommended for annual calving is :
- (A) 1 month (B) 2 months
(C) 3 months (D) 4 months
19. Neutrophil and Lymphocyte counts of normal healthy cattle is :
- (A) 60 and 30 (B) 40 and 10
(C) 30 and 30 (D) 30 and 60
20. White Leghorn breed of poultry is a/an :
- (A) Mediterranean breed (B) American breed
(C) English breed (D) Asiatic breed

21. As per Prevention of Food Adulteration Act, the fat content of milk powder should not be less than :
- (A) 42% (B) 26%
(C) 12% (D) 4%
22. Which of the following species has the highest dressing percentage ?
- (A) Sheep (B) Goat
(C) Cattle (D) Pig
23. In which method of selection, minimum standard is fixed simultaneously for several traits ?
- (A) Tandem method (B) Selection Index
(C) Independent culling level (D) Sire index
24. The correct ascending order of annual genetic gain in the following species of livestock :
- (A) Cattle, sheep, pig, poultry (B) Poultry, pig, sheep, cattle
(C) Poultry, sheep, pig, cattle (D) Poultry, cattle, sheep, pig
25. Consider the following statements :
- (a) Selection creates new gene
(b) Desired gene frequency increases by selection
- Which of the statements given above is/are correct ?
- (A) (a) only (B) (b) only
(C) Both (a) and (b) (D) None of them
26. 'Lard', an animal fat used as cooking fat is obtained from :
- (A) Pig (B) Fish
(C) Sheep (D) Poultry
27. Sickle shaped horn is the characteristic of the following buffalo breed :
- (A) Jaffarbadi (B) Surti
(C) Nagpuri (D) Mehsana
28. When the selection differential is 200 kg and heritability of the trait is 0.4 the genetic gain per generation will be :
- (A) 280 kg (B) 80 kg
(C) 240 kg (D) 40 kg
29. A disease commonly found with regularity in a particular locality is known as :
- (A) Endemic (B) Epidemic
(C) Pandemic (D) Epizootic
30. Free martin is a :
- (A) Female calf born co-twin to a male calf (B) Male calf born co-twin to a female calf
(C) Female calf born co-twin to a female calf (D) Male calf born co-twin to a male calf

31. Sunandini cattle breed developed in Kerala is a cross between :
- (A) Brown Swiss and local cattle (B) HF and local cattle
(C) Jersey and local cattle (D) Red Dane and local cattle
32. An exotic breed of pig with drooping ear is :
- (A) Large white Yorkshire (B) Landrace
(C) Hampshire (D) Berkshire
33. The digestible crude protein content fodder maize is about :
- (A) 10-12% (B) Zero %
(C) 7-8% (D) 1-2%
34. Daily digestible crude protein requirement of cattle weighing 300 kg is :
- (A) 0.2 kg (B) 2 kg
(C) 3.0 kg (D) 1.0 kg
35. Biological value of egg protein is :
- (A) 80% (B) 100%
(C) 94% (D) 75%
36. A good silage should have a pH of :
- (A) 6.2 – 6.4 (B) 8.2 – 8.6
(C) 2.3 – 2.5 (D) 4.2 – 4.5
37. Unhealthy hair and wool in livestock is generally due to the deficiency of :
- (A) Zinc (B) Calcium
(C) Sodium (D) Phosphorus
38. In cattle, the bypass protein bypasses the :
- (A) Large intestine (B) Rumen
(C) Small intestine (D) Entire digestive system
39. Standard lactation length for standardizing the milk record is :
- (A) 270 days (B) 365 days
(C) 330 days (D) 305 days
40. An ideal calf starter ration contains :
- (A) 20% DCP and 70% TDN (B) 50% DCP and 50% TDN
(C) 70% DCP and 20% TDN (D) 40% DCP and 50% TDN
41. The ratio of total number of services to number of animals pregnant/calved is known as :
- (A) Fertility rate (B) Birth rate
(C) Conception rate (D) Service rate

42. The Incubation period of Foot and Mouth Disease is :
 (A) One month (B) Six months
 (C) 15-20 days (D) 3-4 days
43. Which of the following breeds of buffaloes produces highest fat percentage ?
 (A) Bhadawari (B) Surti
 (C) Murrah (D) Nagpuri
44. Dry matter requirement of a lactating buffalo weighing 500 kg is :
 (A) 30 kg (B) 5 kg
 (C) 10 kg (D) 15 kg
45. The drug used for treating bovine ketosis is :
 (A) Sodium bicarbonate (B) Sodium carbonate
 (C) Sodium chloride (D) Sodium propionate
46. The fat deposits in the lean tissue of meat is called :
 (A) Lumping (B) Bubbling
 (C) Adiposing (D) Marbling
47. The milk product which is obtained by draining whey after coagulation of milk is :
 (A) Yoghurt (B) Cheese
 (C) Skimmed milk (D) Paneer
48. The protein content of large poultry egg is about :
 (A) 14-15 gm (B) 6-7 gm
 (C) 1-2 gm (D) 10-12 gm
49. The ideal temperature during first week of brooding of chicks is :
 (A) 90 °F (B) 95 °F
 (C) 100 °F (D) 85 °F
50. Gestation length in pig is about :
 (A) 3 months (B) 4 months
 (C) 5 months (D) 6 months
51. Freshly drawn milk has pH in the range of :
 (A) 7.0 – 7.2 (B) 7.4 – 7.6
 (C) 6.5 – 6.7 (D) 6.0 – 6.2
52. The most commonly used test to detect bacteria in milk is :
 (A) Standard plate count (B) Alcoholic test
 (C) Butyrometer test (D) Gerber method

53. The recommended exotic level of inheritance of cross breeding Indian dairy cattle, for most regions of the country is :
- (A) 75% (B) 50%
(C) 87.5% (D) 95%
54. Modern commercial poultry layers starts to lay egg at the age of around :
- (A) 20 weeks (B) 6 weeks
(C) 30 weeks (D) 40 weeks
55. The heritability of egg weight in poultry is :
- (A) high (B) low
(C) zero (D) 1.0
56. Which one of the following methods is not used for sexing of chicks ?
- (A) Identification of rudimentary testes in cloaca
(B) Rapid and slow feathering
(C) Barring and non-barring
(D) Comb shape
57. The feed cost as the percentage of total cost of commercial poultry production is :
- (A) 60-70 (B) 40-50
(C) Above 90 (D) 30-40
58. The major component of egg shell is :
- (A) Calcium phosphate (B) Calcium chloride
(C) Calcium carbonate (D) Dicalcium phosphate
59. Swine fever in pigs is caused by the virus belonging to the genus :
- (A) Influenza virus (B) Vesiculovirus
(C) Peste virus (D) Calcivirus
60. The Incubation period in Haemorrhagic Septicaemia is about :
- (A) 30 days (B) 60 days
(C) 2 days (D) 120 days
61. Which one of the following diseases is non contagious ?
- (A) Black quarter (B) Bovine pleuropneumonia
(C) Echthyma (D) Ranikhet disease
62. Which of the following is not the species of Theileria causing organism in cattle ?
- (A) T. bovis (B) T. parva
(C) T. annulata (D) T. mutans

63. Which of the following is not an indigenous poultry breed ?
 (A) Aseel (B) Busra
 (C) Karaknath (D) Sahil
64. Hissardale sheep is a cross between :
 (A) Kashmiri Merino and Hissar breeds (B) Bikaner and Rambouillet
 (C) Rambouillet and Marwari (D) Australian Merino and Bikaner
65. Which of the following is correct with regard to the diploid chromosome number ?
 (A) Same in sheep and goat (B) Same in cattle and goat
 (C) Same in buffalo and sheep (D) Same in sheep and cattle
66. Which State is the natural habitat of Jamnapuri goat breed ?
 (A) Gujarat (B) Uttar Pradesh
 (C) North East India (D) Kashmir
67. Which of the following statements is true in cattle ?
 (A) The incisor teeth is absent in the upper jaw
 (B) The upper jaw has four incisors in adults
 (C) Upper and lower jaws have four incisors each
 (D) Upper and lower jaws have two incisors each
68. Persistent Corpora Intea may be observed in :
 (A) Pyometra (B) Mummified fetus
 (C) Mucometra (D) All the above
69. Consider the following with respect to Marek's disease in poultry :
 (a) Marek's disease is a lympho proliferative disease of chickens.
 (b) The Marek's disease virus belongs to the family Retroviridae.
 Which of the statements given above is/are correct ?
 (A) (a) only (B) (b) only
 (C) (a) and (b) (D) None of them
70. The State which has the maximum sheep population in India is :
 (A) Rajasthan (B) Haryana
 (C) Punjab (D) Uttar Pradesh
71. A sheep breed of Himalayan region is :
 (A) Lohi (B) Chokla
 (C) Gaddi (D) Shahabadi

72. In methylene blue reduction test for testing the quality of semen, a good semen should reduce the color in :
- (A) less than one minute (B) 60 minutes
(C) 10-20 minutes (D) 10 seconds
73. Consider the following statements with respect to immunity :
- (a) Passive acquired immunity is that which the animal produces in its own body as a result of disease followed by recovery or by vaccination.
(b) Active acquired immunity is transferred in the form of blood serum globulin to one animal from another which has previously recovered from a disease or has been vaccinated.
- Which of the statements given above is/are correct ?
- (A) (a) only (B) (b) only
(C) Both (a) and (b) (D) None of them
74. With regard to Synchronization of estrous in sheep, consider the following :
- (a) Intramuscular injection of Prostaglandin F₂, once during in teal phase of estrous induce estrous.
(b) Estrogen injection two days after the Progesterone injection can also induce estrous.
- Which of the statements given above is/are correct ?
- (A) (a) only (B) (b) only
(C) Both (a) and (b) (D) None of them
75. Most ideal breeding programme for descript buffalo breeds of India is :
- (A) Inbreeding (B) Selective breeding
(C) Cross breeding (D) Upgrading
76. With regard to Brucellosis in cattle consider the following :
- (a) B. abortus generally causes abortion during the first or second month of pregnancy.
(b) Milk ring test is used as a herd screening test.
- Which of the following statements is/are correct ?
- (A) (a) only (B) (b) only
(C) Both (a) and (b) (D) None of them
77. Consider the following with respect to Tuberculosis :
- (a) Tuberculosis due to Mycobacterium bovis occurs only in cattle but not in other ruminants.
(b) Human beings may also get affected by M. bovis.
- Which of the statements given above is/are correct ?
- (A) (a) only (B) (b) only
(C) Both (a) and (b) (D) None of them

78. Consider the following statements with respect to dystocia :
- (a) Dystocia in anterior presentation is relatively more common than dystocia in posterior presentation in cattle.
 - (b) Posterior presentation is considered pathological in all except the multiparous animals.
- Which of the following statements given above is/are correct ?
- (A) (a) only
 - (B) (b) only
 - (C) Both (a) and (b)
 - (D) None of them
79. The gestation period in rabbit is :
- (A) 60-62 days
 - (B) 50-52 days
 - (C) 40-42 days
 - (D) 30-32 days
80. Which breed of rabbit is exclusively reared for wool ?
- (A) New Zealand White
 - (B) Russian Grey Giant
 - (C) Angora
 - (D) Soviet Chinchilla
81. Photoperiodism is characteristic of the reproductive cycle of the :
- (A) Pig
 - (B) Sheep
 - (C) Cattle
 - (D) All the above
82. Consider the following statements :
- (a) All the ova carry X chromosome
 - (b) Only half of the sperms carry X chromosome
- Which of the statements given above is/are correct ?
- (A) (a) only
 - (B) (b) only
 - (C) Both (a) and (b)
 - (D) None of them
83. The main ingredient of the semen diluents protecting the spermatozoa from freezing injury is :
- (A) Tri sodium citrate
 - (B) Potassium chloride
 - (C) Glycerol
 - (D) Sodium bicarbonate
84. The genes that control quantitative traits are known as :
- (A) Multiple allele
 - (B) Multiple genes
 - (C) Epistatic genes
 - (D) Hypostatic genes
85. The correlation between reproduction efficiency and lactation parameters is :
- (A) Very low
 - (B) Very high
 - (C) One
 - (D) Above one
86. The formula for correcting the fat corrected milk yield is :
- (A) $0.4 (\text{Total fat yield}) + 15 (\text{Total milk yield})$
 - (B) $0.4\% (\text{fat } \%) + 15 (\text{Total milk yield})$
 - (C) $0.4 (\text{Total milk yield}) + 15 (\text{fat } \%)$
 - (D) $0.4 (\text{Total milk yield}) + 15 (\text{Total milk yield})$

87. Superiority of the selected animals to be the parents of the next generation is :
 (A) Selection differential (B) Selection intensity
 (C) Selection index (D) Selection pressure
88. Consider the following statements with respect to selection :
 (a) Fewer the traits under selection slower the progress.
 (b) Individual selection is ideal for traits with high heritability.
 Which of the statements given above is/are correct ?
 (A) (a) only (B) (b) only
 (C) Both (a) and (b) (D) None of them
89. Consider the following statements with respect to inbreeding :
 (a) The main genetic consequence of inbreeding is increase in heterozygosity.
 (b) Inbreeding decreases pre potency.
 Which of the statements given above is/are correct ?
 (A) (a) only (B) (b) only
 (C) Both (a) and (b) (D) None of them
90. Ketosis is a disease of ruminants caused by impairment of metabolism of :
 (A) Protein (B) Carbohydrates and volatile acids
 (C) Protein and carbohydrates (D) Carbohydrates and minerals
91. Hepato intestinal form of schistosomiasis in cattle is caused by :
 (A) Schistosoma indicum (B) Schistosoma nasale
 (C) Schistosoma annulata (D) All the above
92. Which of the following chemicals is generally used for dehorning in calves ?
 (A) Sodium bicarbonate (B) Sodium carbonate
 (C) Caustic potash (D) Magnesium chloride
93. Which of the following is a rickettsial disease in cattle ?
 (A) Anaplasmosis (B) Coccidiosis
 (C) Theileriosis (D) Babesiosis
94. In metabolic acidosis, blood pH falls due to :
 (A) Increased carbonic acid (B) Decreased bicarbonates
 (C) Increased Lactic acid (D) Decreased potassium hydroxide
95. Most ideally, FMD suspected sample should be collected in :
 (A) Formal saline 10% (B) Formaline 10%
 (C) Glycerine 50% (D) Alcohol 70%

96. Haemolytic anaemia is caused by :
(A) Coccidia (B) Anaplasma spp.
(C) Proteus spp. (D) Hemochus
97. Phlebitis is the inflammation of :
(A) Artery (B) Vein
(C) Lymph vessel (D) Capillary
98. Consider the following statements with respect to rigor mortis :
(a) It appears quickly in case of animal died due to strychnine poisoning.
(b) Is enhanced by starvation and cold before the death of the animal.
Which of the statements given above is/are correct ?
(A) (a) only (B) (b) only
(C) Both (a) and (b) (D) None of them
99. The test/s used for detecting mastitis in cattle :
(A) Hotis test (B) Bromothymol blue test
(C) White side test (D) All of them
100. Parasitic cirrhosis is caused by :
(A) Hemonchus sp. (B) Ascaris lumbricoides
(C) Amphistomes (D) Fasciola sp.
101. With respect to diagnosis of rabies, consider the following :
(a) Absence of negri bodies confirms that the animal is not affected by rabies.
(b) Habel's mouse inoculation test is less accurate than negri bodies detection.
Which of the statements given above is/are correct ?
(A) (a) only (B) (b) only
(C) Both (a) and (b) (D) None of them
102. Most common site of calculi lodgement in bullock is :
(A) Pelvic urethra (B) Sigmoid flexure
(C) Neck of the bladder (D) Tip of urethra
103. The hormone that is primarily responsible for the onset of ovarian activity and puberty is :
(A) FSH (B) Progesterone
(C) Estrogen (D) Lutenizing hormone
104. Progeny testing programme is done for the selection of :
(A) Progeny (B) Sire
(C) Dam (D) Both Sire and Dam

105. Consider the following statements with respect to Blue tongue disease :
- (a) It is caused by virus belonging to genus orbivirus of Reoviridae family.
 - (b) It is transmitted by culicoides species of biting midges.
- Which of the statements given above is/are correct ?
- (A) (a) only
 - (B) (b) only
 - (C) Both (a) and (b)
 - (D) None of them
106. Heritability values ranges from :
- (A) 0 to 1
 - (B) - 1 to + 1
 - (C) 1 to 100
 - (D) 2 to 4
107. Primary energy source in ruminants :
- (A) Acetic acid
 - (B) Propionic acid
 - (C) Butyric acid
 - (D) Lactic acid
108. Ghee contains fat percentage of :
- (A) 46 %
 - (B) 99 %
 - (C) 20 %
 - (D) 16 %
109. Milk pasteurization is done at temperature of :
- (A) 110 degree for 15 min
 - (B) 45 degree for 15 min
 - (C) 72 degree for 15 seconds
 - (D) 99 degree for 30 min
110. Most potent green house gas produced by ruminants is :
- (A) CO₂
 - (B) H₂S
 - (C) O₂
 - (D) CH₄
111. Feed conversion ratio is highest in :
- (A) Pig
 - (B) Poultry
 - (C) Sheep
 - (D) Goats
112. Stiff lamb disease in sheep is caused by :
- (A) Vitamin A deficiency
 - (B) Vitamin B₅ deficiency
 - (C) Vitamin B₆ deficiency
 - (D) Vitamin E deficiency
113. Blind staggers is noticed in horses due to :
- (A) Vitamin B₂ deficiency
 - (B) Selenium toxicity
 - (C) Vitamin E toxicity
 - (D) Copper poisoning
114. Double toned milk contains :
- (A) 3% fat and 9% SNF
 - (B) 1.5% fat and 9% SNF
 - (C) 3% fat and 8.5% SNF
 - (D) 1.5% fat and 8.5% SNF

115. Swine influenza is caused by :
- (A) H5N1 (B) H1N1
(C) H2N7 (D) H5N7
116. Linkage between two adjacent nucleotides is :
- (A) Phospho diester bond (B) Hydrogen bond
(C) Phosphate bond (D) Water bond
117. Synthesis of RNA from DNA is known as :
- (A) Translation (B) Transduction
(C) Transcription (D) Transformation
118. Hormone responsible for ovulation is :
- (A) Prolactin (B) Estrogen
(C) LH (D) PGF₂ alpha
119. Actino bacillosis affects :
- (A) Hard tissues (B) Soft tissues
(C) Skin (D) Horns
120. Principal volatile fatty acid produced in rumen is :
- (A) Acetic acid (B) Propionic acid
(C) Butyric acid (D) Lactic acid

ROUGH WORK