

COMPUTER BASED TEST – 2023

PAPER – I

FOR THE POST OF RESEARCH ASSISTANT IN THE INSTITUTE OF VETERINARY PREVENTIVE MEDICINE, RANIPET

**ANIMAL HUSBANDRY & VETERINARY SCIENCE
(POST GRADUATE DEGREE STANDARD)**

1. A protozoan parasite with two dissimilar nuclei is
 - (A) Giardia
 - (B) Hexamita
 - (C) Entamoeba
 - ~~(D)~~ Balantidium
 - (E) Answer not known

2. The media used to culture Trichomonas is
 - (A) NNN media
 - ~~(B)~~ Diamond's media
 - (C) Ringer's media
 - (D) Balamuth's media
 - (E) Answer not known

3. Schaudinn's haemotoxylin staining method is used to diagnose
 - (A) Cryptosporidium
 - ~~(B)~~ Entamoeba histolytica
 - (C) Eimeria bovis
 - (D) Toxoplasma gondii
 - (E) Answer not known

4. Anal pruritus and rat tailed appearance are seen in horses infected with
 - (A) Parascaris equorum
 - (B) Strongylus vulgaris
 - ~~(C)~~ Oxyuris equi
 - (D) Habronema megastoma
 - (E) Answer not known

5. Atretic follicles are
- (A) Follicles that become arrested and then regress
 - (B) Follicles filled with blood
 - (C) Luteinized follicles
 - (D) Cystic follicles
 - (E) Answer not known
6. Knott's concentration method is used to screen
- (A) Theileria
 - (B) Anaplasma
 - (C) Microfilaria
 - (D) Leishmania
 - (E) Answer not known
7. The mode of infection of Hepatozoon canis in dogs is
- (A) Bite of Rhipicephalus sanguineus
 - (B) Ingestion of Rhipicephalus sanguineus
 - (C) Trasovarial cycle in Rhipicephalus sanguineus
 - (D) Transtadial cycle in Rhipicephalus sanguineus
 - (E) Answer not known
8. The severity/intensity of helminthic infection can be assessed by
- (A) Direct smear method
 - (B) Concentration technique
 - (C) Egg counting technique
 - (D) Pasture larval count
 - (E) Answer not known

9. Berlese solution is used for
- (A) Mounting and clearing insects
 - (B) Clearing nematodes
 - (C) Mounting trematodes
 - (D) Fixing blood smear
 - (E) Answer not known
10. 'Husk' or 'Hoose' in calves is caused by
- (A) Dictyocaulus viviparus
 - (B) Mecistocirrus digitatus
 - (C) Haemonchus placei
 - (D) Trichostrongylus axei
 - (E) Answer not known
11. Glycogen can be stained by
- (A) Alcian blue
 - (B) Congored
 - (C) Perl's Prussian blue reaction
 - (D) Best's carmine
 - (E) Answer not known
12. Which one of the following is correctly matched?
- (A) Four plague – Ranikhet disease
 - (B) Goat plague – Peste-des-petits-ruminants
 - (C) Cattle plague – Foot and mouth disease
 - (D) Swine plague – Swine influenza
 - (E) Answer not known

13. Which one of the following leukocyte response to glucocorticoids in cows is correct?
- (A) Neutrophilia
 - (B) Lymphocytosis
 - (C) Eosinophilia
 - (D) Monocytopenia
 - (E) Answer not known
14. Haemorrhage of annular bands of small intestine is seen in
- (A) Duck viral hepatitis
 - (B) Duck viral enteritis
 - (C) Coccidiosis
 - (D) Campylobacteriosis
 - (E) Answer not known
15. Collection of blood in abnormal cavity is called
- (A) Ascites
 - (B) Haemoperitoneum
 - (C) Haematoma
 - (D) Haemangioma
 - (E) Answer not known
16. Foetal stomach content in charcoal medium is collected to diagnose
- (A) Brucellosis
 - (B) Leptospirosis
 - (C) Listeriosis
 - (D) Haemorrhagic septicaemia
 - (E) Answer not known

17. Mesenteric Pyogranulomatous lymphadenitis in horses is due to
- (A) Equine granulomatous enteritis
 - (B) Rhodococcus equi enteritis
 - (C) Equine coccidiosis
 - (D) Equine strongylosis
 - (E) Answer not known
18. Malignant tumour arising from bile duct epithelium is called
- (A) Cholangiocellular carcinoma
 - (B) Hepatocellular carcinoma
 - (C) Adenocarcinoma
 - (D) Cholangioma
 - (E) Answer not known
19. Swayback in sheep is due to
- (A) Deficiency of copper
 - (B) Deficiency of zinc
 - (C) Deficiency of Vitamin B-1
 - (D) Deficiency of Cobalt
 - (E) Answer not known
20. Haemorrhages in skin of chicken are noticed in
- (A) Infection bursal disease
 - (B) Avian influenza
 - (C) Ranikhet disease
 - (D) Sulpha toxicity
 - (E) Answer not known

21. Assertion (A) : Office International des Epizooties is an international organization concerned with global control of epidemic diseases in animals.

Reason (R) : The organization was founded in 1924 in Paris following the outbreak of rinderpest in Belgium.

- (A) Both (A) and (R) are true and (R) is the correct explanation of (A)
- ~~(B)~~ Both (A) and (R) are true and (R) is not the correct explanation of (A)
- (C) (A) is true but (R) is false
- (D) (A) is false but (R) is true
- (E) Answer not known

22. Match correctly the pathological conditions with their corresponding Pathogens:

- | | |
|--|--|
| (a) Spasm of anal sphincter | 1. Leptospire Pomona |
| (b) Subcutaneous swelling | 2. Corynebacterium pseudo tuberculosis |
| (c) Focal interstitial nephritis | 3. Bacillus anthracis |
| (d) Onion peel appearance of lymphnode | 4. Babesic divergens |

- | | (a) | (b) | (c) | (d) |
|----------------|------------------|-----|-----|-----|
| (A) | 3 | 4 | 1 | 2 |
| (B) | 4 | 3 | 2 | 1 |
| (C) | 3 | 4 | 2 | 1 |
| (D) | 2 | 1 | 4 | 3 |
| (E) | Answer not known | | | |

23. Match the following type:

- | | |
|------------------------------------|-----------------------|
| (a) Clostridium perfringens Type A | 1. Lamb dysentery |
| (b) Clostridium perfringens Type B | 2. Necrotic enteritis |
| (c) Clostridium perfringens Type C | 3. Enterotoxaemia |
| (d) Clostridium perfringens Type D | 4. Struck |

- | | (a) | (b) | (c) | (d) |
|----------------|------------------|-----|-----|-----|
| (A) | 3 | 1 | 4 | 2 |
| (B) | 4 | 1 | 3 | 2 |
| (C) | 2 | 4 | 1 | 3 |
| (D) | 2 | 1 | 4 | 3 |
| (E) | Answer not known | | | |

24. Cytopathic and non cytopathic biotypes are associated with

- ~~(A)~~ Bovine viral diarrhoea/Mucosal disease (BVD/MD)
- (B) Peste Des Petits Ruminants (PPR)
- (C) Pseudorabies
- (D) Malignant Catarrhal Fever (MCF)
- (E) Answer not known

25. The study of disease in a small group of individuals with respect to factor that influence its occurrence in a larger segment of population is

- (A) Macro epidemiology
- ~~(B)~~ Micro epidemiology
- (C) Environmental epidemiology
- (D) Comparative epidemiology
- (E) Answer not known

26. Choose the wrong matches type:
- | | | |
|--------------------------------|---|---|
| (1) Monte Carlo model | – | Gambling and Random process |
| (2) Network population model | – | Randomization and Time delay |
| (3) Empirical simulation model | – | Host and Parasite dynamics |
| (4) Matrix population model | – | Stage of hosts/Parasites and Time delay |
- (A) 1, 2 are correct
(B) 1, 3 are correct
(C) 2, 4 are correct
~~(D)~~ 3, 4 are correct
(E) Answer not known
27. Active disease accounting process is called
- (A) Monitoring
~~(B)~~ Surveillance
(C) Intensive follow-up
(D) Outbreak investigation
(E) Answer not known
28. Epidemiological diagnosis involves
- (A) Healthy animals
(B) Sick animals
(C) Dead animals
~~(D)~~ Whole population
(E) Answer not known

29. The major serum Immunoglobulin is
- (A) IgA
 - (B) IgG
 - (C) IgM
 - (D) IgE
 - (E) Answer not known
30. Which level of biosafety hoods are used if the agents are least infectious?
- (A) Biosafety level 3
 - (B) Biosafety level 1
 - (C) Biosafety level 2
 - (D) Biosafety level 4
 - (E) Answer not known
31. _____ is a component of vaccine which is used to enhance the immune response of an inactivated vaccine.
- (A) Allo antigen
 - (B) Adjuvant
 - (C) Hapten
 - (D) Super antigen
 - (E) Answer not known

32. Match correctly the properties of a diagnostic test:

- | | |
|----------------------------|---------------------------------------|
| (a) Analytical specificity | 1. True positives in a test |
| (b) Sensitivity | 2. Non-diseased animals |
| (c) Diagnostic specificity | 3. Degree of stability in a test |
| (d) Reliability | 4. Refinement in antigenic definition |

- | | (a) | (b) | (c) | (d) |
|--------------------------------------|------------------|-----|-----|-----|
| <input checked="" type="radio"/> (A) | 4 | 1 | 2 | 3 |
| (B) | 3 | 1 | 4 | 2 |
| (C) | 1 | 3 | 4 | 2 |
| (D) | 1 | 4 | 2 | 3 |
| (E) | Answer not known | | | |

33. Choose the right answer:

The formula $\frac{TP}{TP + FN}$ is used to calculate the accuracy of serologic testing for finding the [TP – number of true positive specimen, FN is false negative specimen numbers]

- (i) Positive predictive value
 - (ii) Negative predictive value
 - (iii) Sensitivity
 - (iv) Specificity
- (A) (i) and (ii) only
(B) (iv) only
 (C) (iii) only
(D) (iii) and (iv) only
(E) Answer not known

34. The staining method, which is very useful for detection of certain bacteria (like *Corynebacterium diphtheriae*) in which the metachromatic granules take up a blackish to bluish-black colour whereas the cells stain green.
- (A) Albert's stain
 - (B) Seller's stain
 - (C) Leishman's stain
 - (D) Giemsa stain
 - (E) Answer not known
35. Arrange the following sequence of pathogenic events in case of rabies:
- I. Spinal nerve destruction and dysfunction.
 - II. Signs of irritability and convulsions.
 - III. Paralysis of hindlimbs.
 - IV. Replication of virus in brain.
- (A) (IV), (I), (II), (III)
 - (B) (II), (III), (I), (IV)
 - (C) (I), (IV), (II), (III)
 - (D) (IV), (II), (I), (III)
 - (E) Answer not known
36. _____ are long whip like appendages present in bacteria enabling locomotion.
- (A) Flagella
 - (B) Fimbriae
 - (C) Capsule
 - (D) Endosporea
 - (E) Answer not known

37. _____ is the term frequently used to describe the infection that is caused by alien organism such as *C albicans* as a result of the alteration or suppression of the normal flora by Prolonged antibiotic administration.
- (A) Recombination
 - (B) Drug resistance
 - (C) Super infection
 - (D) Mutation
 - (E) Answer not known
38. Choose the right matches among type:
- | | | |
|--------------------------|---|-------------------------|
| (1) Tuberculosis | – | Caseation in lungs |
| (2) Sheep pasteurellosis | – | Mastitis |
| (3) Johne's disease | – | Diarrhea and emaciation |
| (4) Swine erysipelas | – | Pericarditis |
- (A) (1) and (3) are correct
 - (B) (1) and (2) are correct
 - (C) (2) and (4) are correct
 - (D) (2) and (3) are correct
 - (E) Answer not known
39. Bacterial structure associated with an Imagination of the Plasma membrane and it is the site of respiratory enzyme.
- (A) Thylakoid membrane
 - (B) Ribosome
 - (C) Lysozyme
 - (D) Mesosome
 - (E) Answer not known

40. The process which eliminate or destroy viable micro-organisms is
- (A) Sterilization
 - (B) Disinfection
 - (C) Antisepsis
 - (D) Pasteurization
 - (E) Answer not known
41. What is physiotherapy instrument which acts on the principle of convective heat?
- (A) Infra red lamp
 - (B) Ultraviolet lamp
 - (C) Whirlpool turbulator
 - (D) Short wave diathermy
 - (E) Answer not known
42. What is useful for Imaging of the direction and velocity of blood flow?
- (A) Ultrasound imaging
 - (B) X-ray imaging
 - (C) Doppler technique
 - (D) Xeroradiography
 - (E) Answer not known

43. Multiple hyper echoic foci artifacts that occurs at regular intervals on the ultrasound image is called
- (A) Reverberation
 - (B) Mirror image
 - (C) Side lobe
 - (D) Acoustic shadow
 - (E) Answer not known
44. Which one of the following vitamin is essential for formation of inter cellular substance and maturation of the pre collagen of connective tissue during wound healing?
- (A) Vitamin K
 - (B) Vitamin D
 - (C) Vitamin C
 - (D) Vitamin A
 - (E) Answer not known
45. Which one of the following artifact commonly encountered when the liver is imaged with diaphragm/lung interface during ultrasonography?
- (A) Reverberation
 - (B) Acoustic shadow
 - (C) Duplication/Mirror image
 - (D) Side lobe
 - (E) Answer not known

46. Which artifact mimics the presence of sludge or sediment during urinary bladder and the gall bladder examination through ultrasonography?
- (A) Reverberation
 - ~~(B) Slice thickness~~
 - (C) Mirror image
 - (D) Side lobe
 - (E) Answer not known
47. Which of the following describes the inability to distinguish the margins when two structures of the same radiopacity are in contact, with each other?
- (A) Summation sign
 - (B) Magnification
 - ~~(C) Silhouette sign~~
 - (D) Distortion
 - (E) Answer not known
48. In case of Tumour Excision, the normal tissues should be excised at the range of distance for benign and malignant tumour respectively
- (A) 2 cm, 5 cm
 - ~~(B) 1 cm, 2-3 cm~~
 - (C) 2-3 cm, 4-5 cm
 - (D) 3 cm, 4-5 cm
 - (E) Answer not known

49. What is called formation of excessive granulation tissue during wound healing?
- (A) Ulcer
 - (B) Necrosis
 - (C) Proud flesh
 - (D) Gangrene
 - (E) Answer not known
50. Which one of the following is not related to diagnosis canine hip dysplasia through a radiograph?
- (A) Scout view method
 - (B) Ortolani method
 - (C) Norberg's angle
 - (D) Pen Hip method
 - (E) Answer not known
51. What is described as Administration of adequate nutrients to surgical patients through gastrotomy or enterostomy tube?
- (A) Enteral hyperalimentation
 - (B) Parenteral hyperalimentation
 - (C) Partial Parenteral hyperalimentation
 - (D) Rectal hyperalimentation
 - (E) Answer not known

52. Which type of Fracture is more common at attachment ribs of tendons?
- (A) Compression fracture
 - (B) Segmental fracture
 - (C) Slab fracture
 - (D) Avulsion fracture
 - (E) Answer not known
53. Which one of the following drug is used both as a sedative and as a pre-anaesthetic medicant in pigs?
- (A) Fluphenazine
 - (B) Droperidol
 - (C) Fluanizone
 - (D) Azaperone
 - (E) Answer not known
54. Give an example of competitive antagonist for benzodiazepines
- (A) Flumazenil
 - (B) Climazolam
 - (C) Diprenorphine
 - (D) Nalaxone
 - (E) Answer not known

55. At what level of arterial partial pressure of oxygen (PaO_2) mechanical ventilation is needed?
- (A) 80-90 mm Hg
 - (B) 70-80 mm Hg
 - (C) 60-70 mm Hg
 - (D) 50-60 mm Hg
 - (E) Answer not known
56. Which of the following describes the surgery where in every attempt is made to preserve or restore a disabled part rather than its removal?
- (A) Aseptic surgery
 - (B) Orthopaedic surgery
 - (C) Radical surgery
 - (D) Conservative surgery
 - (E) Answer not known
57. Surgical procedure performed to prevent the recurrence of intussusception
- (A) Enterectomy
 - (B) Enteroanastomosis
 - (C) Enteroenteropexy
 - (D) Gastropexy
 - (E) Answer not known

58. What is the suture pattern commonly used for closure of the hernial ring?
- (A) Overlapping suture pattern
 - (B) Connell suture pattern
 - (C) Simple interrupted suture pattern
 - (D) Vertical mattress suture pattern
 - (E) Answer not known
59. Which surgery can be postponed without endangering the life of the animal?
- (A) Radical surgery
 - (B) Emergency surgery
 - (C) Elective surgery
 - (D) Major surgery
 - (E) Answer not known
60. Which one of the following nerve block is given for dehorning in goats?
- (A) Infra trochlear nerve block
 - (B) Auriculopalpebral nerve block
 - (C) Retrobulbar nerve block
 - (D) Peterson nerve block
 - (E) Answer not known
61. No livestock should be imported without a
- (A) Insurance certificate
 - (B) Antemortem certificate
 - (C) Health certificate
 - (D) Valid certificate
 - (E) Answer not known

62. Inspection of food is done to protect consumer against
- (A) infections
 - (B) injury
 - (C) fever
 - (D) vomiting
 - (E) Answer not known
63. The only legitimate method of gaining professional reputation by a veterinary practitioner
- (A) Canvassing for practice
 - (B) Using higher professional degree
 - (C) Ethical conduct
 - (D) Advertise as specialist
 - (E) Answer not known
64. The Reason for low slaughter rate (2%) for cattle in India.
- (A) Less no of slaughter houses
 - (B) Low cattle population
 - (C) High mortality in calves
 - (D) Cow is sacred in India
 - (E) Answer not known

65. The import of _____ is not allowed against an import license issued by DGFT.
- (A) Live Fish
 - ~~(B)~~ Live Shrimp
 - (C) Live Crab
 - (D) Live Crayfish
 - (E) Answer not known
66. Adulteration of milk and milk products is punishable under, I.P.C.
- (A) 377
 - ~~(B)~~ 272
 - (C) 465
 - (D) 428
 - (E) Answer not known
67. The presence of nitrates in milk is indicative of adultration of milk with
- ~~(A)~~ Water
 - (B) Colouring agent
 - (C) Starch
 - (D) Animal fat
 - (E) Answer not known

68. Duties of chief wild life warden in Immunization practices includes the following, except,
- (A) Taking measures for vaccination of cattle with in 5 km or a sanctuary
 - (B) Shall permit any livestock into sanctuary without vaccinations
 - (C) May regulate grazing of livestock
 - (D) May take measures to ensure security of wild life
 - (E) Answer not known
69. The major fund allocation for infrastructure development of Veterinary institutions in Tamil Nadu was by .
- (A) State fund
 - (B) NADP
 - (C) NABARD
 - (D) ESVHD
 - (E) Answer not known
70. The veterinarian should have fair knowledge on ————— subjects for his responsibilities in vitro – legal cases both as witness and as an expert.
- (A) Veterinary subjects
 - (B) Law subjects
 - (C) Forensic subjects
 - (D) Photography
 - (E) Answer not known

71. Choose the correct statement :

- (1) Maiming means making an animal useless by cutting of tendons of leg and neck
- (2) Cranial intercourse with animal against the nature is termed as bestiality
- (3) Bistoping is a procedure to make the animal become older
- (A) (1) and (3) only
- ~~(B)~~ (1) and (2) only
- (C) (2) only
- (D) (1) only
- (E) Answer not known

72. Mobile veterinary dispensaries available in the states with the main objective of

- ~~(A)~~ To reduce morbidity and mortality
- (B) To increase production
- (C) To supply feed and fodder
- (D) To transfer technology
- (E) Answer not known

73. The recently established Veterinary Epidemiology Centre (VEC) in Tamil Nadu state is located at

- (A) Ranipet
- ~~(B)~~ Chennai
- (C) Namakkal
- (D) Vellore
- (E) Answer not known

74. Unvaccinated dogs and cats originating from countries where rabies exists are vaccinated on arrival and quarantined for a period of _____ days.
- (A) 22 – 29
 - (B) 57 – 60
 - (C) 30 – 45
 - (D) 46 – 55
 - (E) Answer not known
75. Government of India have issued _____ to regularise production of meat/meat products in an hygienic manner.
- (A) FSSAI
 - (B) MFPO
 - (C) BIS
 - (D) ISO
 - (E) Answer not known
76. The animal related acts and legal procedures are dealt in
- (A) Civil courts
 - (B) Criminal courts
 - (C) District courts
 - (D) High courts
 - (E) Answer not known

77. The prevention of cruelty to animals Act, 1960 shall not apply to
- (A) starvation
 - (B) overcrowding
 - (C) ill-treatment
 - ~~(D) dehorning~~
 - (E) Answer not known
78. The main objective of National Livestock Mission in the 12th Five year plan is
- (A) Quality Meat Production
 - (B) Improved egg production
 - (C) Development of sector milk
 - ~~(D) Availability of quality feed and fodder~~
 - (E) Answer not known
79. The average space provided per cattle in railway wagon shall not be less than
- (A) 5 m²
 - (B) 3 m²
 - ~~(C) 2 m²~~
 - (D) 1 m²
 - (E) Answer not known

80. Frauds in the sale of livestock are punishable under the section _____ of IPC.
- (A) 377
 - (B) 428
 - (C) 429
 - (D) 420
 - (E) Answer not known
81. The objectives of meat packaging is
- (A) To prevent fat content loss
 - (B) To prevent protein loss
 - (C) To prevent moisture loss
 - (D) To increase lipid oxidation
 - (E) Answer not known
82. The commonly used enzymes for tenderization of meat are
- (A) Papain, Bromolein and Myosin ATPase
 - (B) Bromolein, Amylase and Lactate dehydrogenase
 - (C) Papain, Bromolein and ficin
 - (D) Ficin, Myosin dehydrogenase and CASF
 - (E) Answer not known
83. Poultry meat has high nutritive value with a biological value of
- (A) 95%
 - (B) 82%
 - (C) 70%
 - (D) 60%
 - (E) Answer not known

84. Choose the right matches among type :
- (1) Bologna – Emulsion type of sausage
 - (2) Mortadella – Dry sausage
 - (3) Hot dog – Wet sausage
 - (4) Salami – Cured sausage
 - ~~(A)~~ (1) and (2) are correct
 - (B) (1) and (3) are correct
 - (C) (2) and (3) are correct
 - (D) (3) and (4) are correct
 - (E) Answer not known
85. The offal (variety meat) from buffalo carcass with highest content of vitamin A (IU) is
- (A) Brain
 - (B) Tongue
 - (C) Lungs
 - ~~(D)~~ Liver
 - (E) Answer not known
86. The average dressing percentage of sheep carcass is
- (A) 30 – 35%
 - ~~(B)~~ 45 – 50%
 - (C) 55 – 60%
 - (D) 65%
 - (E) Answer not known

87. The Act of detection of adhesions in the thoracic cavity is known as
- (A) Porging
 - ~~(B) Searching~~
 - (C) Bunging
 - (D) Pithing
 - (E) Answer not known
88. The order of unit operations in pig slaughtering is
1. Stunning
 2. Scalding
 3. Singeing
 4. Sticking
- (A) 1, 4, 3, 2
 - ~~(B) 1, 4, 2, 3~~
 - (C) 1, 2, 3, 4
 - (D) 1, 3, 2, 4
 - (E) Answer not known
89. Quick chilling of carcasses are done normally with air circulation rates of _____ times the room volume per hour.
- (A) 05 – 25
 - (B) 30 – 50
 - (C) 55 – 65
 - ~~(D) 70 – 110~~
 - (E) Answer not known

90. The back fat thickness of the pig carcass is measured at the level of
- (A) 2nd rib
 - (B) 5th rib
 - ~~(C) 7th rib~~
 - (D) 12th rib
 - (E) Answer not known
91. Birds received dead on arrival (DOA) at poultry slaughter house are
- (A) Bled immediately
 - (B) Dressed and eviscerated immediately
 - (C) Detailed inspection
 - ~~(D) Condemned~~
 - (E) Answer not known
92. One of the practices involved in HACCP is
- ~~(A) GMP~~
 - (B) GDP
 - (C) MPN
 - (D) DEFT
 - (E) Answer not known
93. Baudouin test is used to detect adulteration in
- (A) Butter
 - ~~(B) Ghee~~
 - (C) Khoa
 - (D) Channa
 - (E) Answer not known

94. _____ is the common gas used for packaging of milk powder.

- (A) Oxygen
- (B) Carbon di-oxide
- (C) Nitrogen
- (D) Freon
- (E) Answer not known

95. Granulation in ghee is primarily due to

- (A) Palmitic acid
- (B) Oleic acid
- (C) Lactic acid
- (D) Sugar
- (E) Answer not known

96. Whole milk powder should contain not less than

- (A) 6% fat
- (B) 10% fat
- (C) 20% fat
- (D) 26% fat
- (E) Answer not known

97. Given below are two statements, one is labelled as Assertion (A) and the other is labelled as Reason (R).

Assertion (A) : In cream, microbial growth is faster than milk.

Reason (R) : During cream separation, most of the microorganisms in the milk go into the skim milk portion when compared to the cream portion.

Choose the correct answer from the options given below.

- (A) Both (A) and (R) are true; and (R) is the correct explanation of (A)
- (B) Both (A) and (R) are true, but (R) is not the correct explanation of (A)
- (C) (A) is true but (R) is false
- (D) (A) is false but (R) is true
- (E) Answer not known

98. Consider the following statements regarding the "Starter Cultures".

(A) All normal pure lactic acid bacteria are catalase positive

(B) A good starter culture should produce a bacteriocin (Proteinaceous substance inhibitory to related strains)

(C) A negative sugar fermentation test indicates that the strains may easily lose the power to ferment a particular sugar.

Choose the correct answer from the options given below.

- (A) Only A is correct
- (B) A and B are correct
- (C) B and C are correct
- (D) Only C is correct
- (E) Answer not known

99. An active starter culture in milk processing has functions :
- (a) Acid production
 - (b) Flavour production
 - (c) Alkali production
 - (d) Antibiotic effect
 - (e) Slime production
- (A) (a), (b), (c)
(B) (b), (c), (d)
(C) (d), (c), (e)
~~(D)~~ (d), (a), (b)
(E) Answer not known
100. As per FSSAI norms, the milk processing areas should have a minimum light requirement of _____ units.
- ~~(A)~~ 500 lux
(B) 400 lux
(C) 300 lux
(D) 150 lux
(E) Answer not known
101. Which of the following drug is not a broad spectrum antimicrobial agent?
- (A) Ampicillin
 - (B) Chloramphenicol
 - (C) Oxytetracycline
 - ~~(D)~~ Erythromycin
 - (E) Answer not known

102. Which anaesthetic has lowest blood solubility?

- (A) Isoflurane
- (B) Nitrous oxide
- (C) Ether
- (D) Halothane
- (E) Answer not known

103. Which of the following compound is not a direct acting organo phosphorous insecticide?

- (A) Dichlorvos
- (B) Tabun
- (C) Diazinon
- (D) Malathion
- (E) Answer not known

104. The dog capturing squad shall consist of personnel, except

- (A) Driver of Dog van
- (B) Two or more employees trained in dog capture
- (C) Local Panchayat employee
- (D) Representative of Animal welfare organisation
- (E) Answer not known

105. Which of the following injectable anaesthetics has very rapid onset of action when given intravenously?

- (A) Pentobarbital
- (B) Thiopental
- (C) Chloral hydrate
- (D) Secobarbital
- (E) Answer not known

106. An example for ultra short acting barbiturates is

- (A) Phenobarbitone
- (B) Pentobarbitone
- (C) Thiopental sodium
- (D) Butobarbitone
- (E) Answer not known

107. The following protein is found in blood brain barrier to expel the drug from central nervous system

- (A) Cytochrome P1A1
- (B) Glucuronyl transferase
- (C) P – glycoprotein
- (D) Glutathione transferase
- (E) Answer not known

108. Which part of Ipecacuanha plant is being used for preparation of emetic agent for animals?
- (A) Bark
 - (B) Leaf
 - (C) Root
 - (D) Flower
 - (E) Answer not known
109. Active transport of a drug is characterized by the following except
- (A) Carrier mediation
 - (B) Structure specificity
 - (C) Energy independent
 - (D) Saturation Process
 - (E) Answer not known
110. What is the use of derivative obtained from Mayapple plant?
- (A) Analgesic agent
 - (B) Anti neoplastic agent
 - (C) Anthelmintic agent
 - (D) Cardiac stimulant
 - (E) Answer not known
111. Which one of the breed is more susceptible to parturient paresis?
- (A) Jersey
 - (B) Friesian
 - (C) Guernsey
 - (D) Sahiwal
 - (E) Answer not known

112. Nutritional Muscular dystrophy is caused by deficiency of

- (A) Selenium and Vitamin E
- (B) Ca and P
- (C) Zinc and Ca
- (D) Cobalt and Zinc
- (E) Answer not known

113. Which of the following is used for treating Disseminated intra vascular coagulation?

- (A) Calcium
- (B) Adrenaline
- (C) Insulin
- (D) Low molecular weight Heparin
- (E) Answer not known

114. In Echocardiography, which is the sensitive index used to measure left ventricular contraction?

- (A) Wall thickness
- (B) Cardiac chamber size
- (C) Fractional shortening
- (D) Outflow velocity
- (E) Answer not known

115. The Normal blood glucose level in cattle is _____ mg/dl.
- (A) 50
 - (B) 70
 - (C) 80
 - (D) 90
 - (E) Answer not known
116. Which of the following is used for Broncho Alveolar Lavage (BAL) sampling in dogs?
- (A) Small sized stomach tube
 - (B) Foley's catheter
 - (C) Thoracocentesis catheter
 - (D) Flexible fibroscope
 - (E) Answer not known
117. Which type of endoscope is best suited for rhinoscopic examination of caudal nasal passage?
- (A) Rigid otoscope
 - (B) Rigid arthroscope
 - (C) Flexible thin fibre optic scope
 - (D) Flexible gyroscope
 - (E) Answer not known

118. What is the pulse rate in adult cattle?

- (A) 60 – 80
- (B) 100 – 120
- (C) 40 – 50
- (D) 120 – 140
- (E) Answer not known

119. What is the characteristics of Right Atrial Enlargement in electro cardiographically?

- (A) P wave of increased amplitude in Lead II
- (B) P wave of increased duration in Lead II
- (C) Continuous flattening/absence of P wave
- (D) Small QRS complex with no P wave
- (E) Answer not known

120. Cud – dropping is due to

- (A) Pharyngeal paralysis
- (B) Rabies
- (C) Hypoglossal nerve paralysis
- (D) Laryngeal paralysis
- (E) Answer not known

121. _____ with ultrasound examination day 55 of gestation in cattle.

- (A) Heart beat
- (B) Scrotal swelling
- (C) Genital tubercle
- (D) Mammary keats
- (E) Answer not known

122. The first successful embryo transfer was done in rabbits by _____ in the year 1890.

- (A) Drost
- (B) Warwick
- (C) Ian Wilmut
- (D) Walter Heape
- (E) Answer not known

123. In the process of mating, penile protrusion is preceded by

- (A) Erection
- (B) Mounting
- (C) Intromission
- (D) Ejaculation
- (E) Answer not known

124. In sheep, totipotency of blastomeres is maintained upto the

- (A) Two – cell stage
- (B) Four – cell stage
- (C) Eight – cell stage
- (D) 16 cell stage
- (E) Answer not known

125. The best packaging material for frozen semen is

- (A) Glass ampoules
- (B) Pellets
- (C) Plastic vials
- (D) Straw
- (E) Answer not known

126. The first artificial insemination in dogs was performed by

- (A) Rossi
- (B) Heape
- (C) Spallanzani
- (D) Perry
- (E) Answer not known

127. The first transgenic mice was documented in the year

- (A) 1977
- (B) 1980
- (C) 1982
- (D) 1985
- (E) Answer not known

128. X-bearing spermatozoa of domestic animals contain approximately _____ % more DNA than Y bearing sperms.

- (A) 2
- (B) 4
- (C) 6
- (D) 8
- (E) Answer not known

129. Example for diffuse type of placenta

- I. Mare
 - II. Cow
 - III. Sow
 - IV. Bitch
- (A) (I) and (II) are correct
 - (B) (II) and (IV) are correct
 - (C) (III) and (I) are correct
 - (D) (IV) and (I) are correct
 - (E) Answer not known

130. Cuboni's Test is used for detection of pregnancy in the species of

- (A) Ewe
- (B) Bitch
- (C) Mare
- (D) Cow
- (E) Answer not known

131. The shape of the ovary in ewe is

- (A) Oval
- (B) Bean – shaped
- (C) Almond – shaped
- (D) Mulberry – like
- (E) Answer not known

132. Severe teratologic defects or anomalies of development occur mostly in

- (A) The period of ovum
- (B) The period of embryo
- (C) The period of fetus
- (D) The period of final fetal growth
- (E) Answer not known

133. The inability to withdraw the penis into the prepuce is called

- (A) Phinosis
- (B) Paraphimosi
- (C) Balanoposthitis
- (D) Ruptured Penis
- (E) Answer not known

134. A young bull is selected for breeding if the reaction time is

- (A) Less than 10 minutes
- (B) 10 – 20 minutes
- (C) 20 – 30 minutes
- (D) More than 30 minutes
- (E) Answer not known

135. Correction of foetus from dorso-iliac position to dorso-sacral position is done by

- (A) Repulsion
- (B) Rotation
- (C) Version
- (D) Traction
- (E) Answer not known

136. A "true hermaphrodite" has

- (A) Gonads of both sexes
- (B) Male gonad and feminized external genitalia
- (C) Female gonad and virilized external genitalia
- (D) Accessory sex glands that are non-responsive to androgens
- (E) Answer not known

137. The mean calving interval of all the cows in a herd at a specific point of time is called

- (A) Calving to first service interval
- (B) Calving index
- (C) Calving interval
- (D) Calving – conception interval
- (E) Answer not known

138. In most cows the presence of very relaxed pelvic ligaments indicate that partuition will probably occur in

- (A) 12 to 24 hours
- (B) 24 to 48 hours
- (C) 60 to 72 hours
- (D) 72 to 96 hours
- (E) Answer not known

139. In cows, which of the following is NOT related to cystic ovarian degeneration?
- (A) Adrenal virilism
 - ~~(B) Onanism~~
 - (C) Sterility Hump
 - (D) Endometrial swiss check appearance
 - (E) Answer not known
140. The mode of transmission for Leptospirosis to cause abortion in cattle is
- ~~(A) cutaneous~~
 - (B) Transplacental
 - (C) Ingestion
 - (D) Aerosol infection
 - (E) Answer not known
141. During Lactogenesis, which of the following hormone increases the number of prolactin receptors in mammary cells?
- ~~(A) Estrogen~~
 - (B) Progesterone
 - (C) Gluco corticoids
 - (D) Thyroxine
 - (E) Answer not known

142. Feeding high energy diet near puberty reduces milk yield potential of an animal due to
- (A) Increased growth of parenchyma
 - (B) Decreased mammary growth at puberty
 - (C) Allometric growth phase
 - (D) Excess fat deposition in mammary gland
 - (E) Answer not known
143. Which of the following is/are not the adenohypophysis hormone?
- (1) FSH
 - (2) ACTH
 - (3) ADH
 - (4) TSH
- (A) (3) only
 - (B) (2) only
 - (C) (3) and (1) only
 - (D) (2) and (3) only
 - (E) Answer not known
144. In which part of the brain, the pneumotoxic respiratory center is located?
- (A) Medulla Oblongata
 - (B) Hypothalamus
 - (C) Cerebral cortex
 - (D) Pons
 - (E) Answer not known

145. In which part of the brain, the neural center for emetic mechanism is located?

- (A) Hypothalamus
- (B) Pons
- ~~(C) Medulla~~
- (D) Cerebral cortex
- (E) Answer not known

146. Rouleau formation of Red Blood Cell is prominent in the order

- (A) Dog, Cat, Horse
- (B) Cat, Dog, Horse
- ~~(C) Horse, Dog, Cat~~
- (D) Cat, Horse, Dog
- (E) Answer not known

147. Choose the correct match:

- | | |
|---|-------------------------|
| (a) $\beta(1 \rightarrow 4)$ linkage of plant cell wall | 1. Selenomonas |
| (b) Lactate utilizer | 2. Butyrovibrio general |
| (c) $\alpha(1 \rightarrow 4)$ linkage in starch | 3. Lactobacilli |
| (d) Rodent and rabbit small intestine | 4. Ruminobacter |

- | | (a) | (b) | (c) | (d) |
|----------------|------------------|-----|-----|-----|
| (A) | 4 | 3 | 2 | 1 |
| (B) | 2 | 4 | 1 | 3 |
| (C) | 2 | 1 | 4 | 3 |
| (D) | 4 | 1 | 3 | 2 |
| (E) | Answer not known | | | |

148. Which one of the following leukocytes is often increased in number in the presence of either local inflammatory reactions of allergic origin or certain types of parasitism?

- (A) Neutrophils
- (B) Eosinophils
- (C) Monocytes
- (D) Lymphocytes
- (E) Answer not known

149. The dilated origin of the ureter in horse kidneys

- (A) Hilus
- (B) Renal pelvis
- (C) Renal pyramid
- (D) Renal sinus
- (E) Answer not known

150. In stallion the anterior surface of the penis is surrounded by a prominent denticulated margin

- (A) Fossa glandis
- (B) Corona glandis
- (C) Collum glandis
- (D) Urethral process
- (E) Answer not known

151. The exact anatomical location of bifurcation of trachea in Dog.

- (A) 5th rib
- (B) 6th rib
- (C) 7th rib
- (D) 8th rib
- (E) Answer not known

152. In female the dorsal surface of the urinary bladder is related to

- (A) Ductus deferentes
- (B) Vesicular seminales
- (C) Prostate
- (D) Uterus
- (E) Answer not known

153. Match List I with List II :

List I		List II	
Subdivisions of Neural Tube		Adult brain structures	
(a) Telencephalon		1. Corpora quadrigemina	
(b) Dien cephalon		2. Medulla oblongata	
(c) Mesen cephalon		3. Thalamus and hypo thalamus	
(d) Myelen cephalon		4. Cerebral hemispheres	

Choose the correct answer from the options given below:

- | | (a) | (b) | (c) | (d) |
|--------------------------------------|------------------|-----|-----|-----|
| (A) | 2 | 1 | 3 | 4 |
| (B) | 4 | 2 | 3 | 1 |
| (C) | 3 | 2 | 4 | 1 |
| <input checked="" type="radio"/> (D) | 4 | 3 | 1 | 2 |
| (E) | Answer not known | | | |

154. The Cranial nerve which supplies Skeletal Muscle is

- (A) 10th Cranial Nerve
- (B) 11th Cranial Nerve
- (C) 12th Cranial Nerve
- (D) 9th Cranial Nerve
- (E) Answer not known

155. The upper cheek teeth embedded in the largest facial bone

- (A) Pre – maxillae
- (B) Maxillae
- (C) Zygomatic
- (D) Palatine
- (E) Answer not known

156. In oscoxae, the base of the sacrum, the iliopectineal lines and the pecters pubis ventrally forms

- (A) Pelvic diaphragm
- (B) Greater sciatic foramen
- (C) Lesser sciatic foramen
- (D) Pelvic inlet
- (E) Answer not known

157. Synsacrum is found in

- (A) Ox
- (B) Fowl
- (C) Horse
- (D) Dog
- (E) Answer not known

158. The pelvic inlet or brim is almost circular in

- (A) Stallion
- (B) Mare
- (C) Gelding
- (D) Foal
- (E) Answer not known

159. The special feature in femur of horse is

- (A) Trochanteric fossa
- (B) Calcav
- (C) Trochanter tertius
- (D) Sulcus muscularis
- (E) Answer not known

160. OS pelvis is a visceral bone present in

- (A) Dog
- (B) Ruminants
- (C) Pig
- (D) Camel
- (E) Answer not known

161. _____ is an electronic – mechanical device designed to perform tasks automatically and repeatedly with speed and accuracy.

- (A) Smart phone
- (B) Robot
- (C) Tik-tak
- (D) WhatsApp
- (E) Answer not known

162. In which district, the milk producer's cooperative union was first formed?

- (A) Kaira
- (B) Anand
- (C) Gandhinagar
- (D) Ahmedabad
- (E) Answer not known

163. The difference between the selling price and the cost price of a good is called as the _____ of the farmer.

- (A) Net income
- (B) Gross profit
- (C) Gross income
- (D) Net profit
- (E) Answer not known

164. The process of transfer of ownership of goods and services from seller to buyer or mutually agreed terms is called as

- (A) Buying
- (B) Selling
- (C) Procuring
- (D) Negotiation
- (E) Answer not known

165. Mortality in a broiler farm usually is

- (A) 15%
- (B) 5%
- (C) 10%
- (D) 20%
- (E) Answer not known

166. Contribution of livestock to agricultural GDP is on the _____ and that of agriculture to total GDP is on the _____ in the country.

- (A) Decrease, increase
- (B) Increase, decrease
- (C) Increase, increase
- (D) Decrease, decrease
- (E) Answer not known

167. Which one is not a factor of production?

- (A) Land
- (B) Capital
- (C) Labour
- (D) Interest
- (E) Answer not known

168. A separate ministry for Animal Husbandry at the Central Government was formed in the year
- (A) 2019
 - (B) 2014
 - (C) 2008
 - (D) 2001
 - (E) Answer not known
169. Total cost of production includes
- (A) Fixed cost
 - (B) Variable cost
 - (C) Both fixed and variable costs
 - (D) Average and marginal costs
 - (E) Answer not known
170. The rise in price of commodity is followed by rise in quantity demanded of it and vice versa
- (A) Robbin Critics
 - (B) Giffen's Good
 - (C) Adam's Law
 - (D) Commodity Price Law
 - (E) Answer not known

171. Length of time required for an individual or organization to pass through the innovation decision process is called as the

- (A) Speed of innovation
- (B) Rate of adoption
- (C) Innovation – Decision period
- (D) Innovation velocity
- (E) Answer not known

172. _____ is the degree by which an individual adopts new ideas earlier than other members of a system.

- (A) Compatibility
- (B) Observability
- (C) Early adoption
- (D) Innovativeness
- (E) Answer not known

173. One picture is worth of

- (A) 10 words
- (B) 100 words
- (C) 1000 words
- (D) 10000 words
- (E) Answer not known

174. _____ is a way of showing people the value or worth of an improved practice whose success has already been established.

- (A) Result demonstration
- (B) Method demonstration
- (C) Minikit trial
- (D) Meeting
- (E) Answer not known

175. Real objects taken out of their natural settings.

- (A) Models
- (B) Specimens
- (C) Mock-ups
- (D) Objects
- (E) Answer not known

176. _____ is an intensive teaching activity undertaken of an appropriate time for a brief period.

- (A) Lecture
- (B) Campaign
- (C) Debate
- (D) Tour
- (E) Answer not known

177. Assertion (A) : Panchayat Raj institution in India were introduced to decentralize power among local units.

Reason (R) : Decentralization allows local self governance and ensures the effective participation of people for successful implementation of programmes.

(A) (A) is true but (R) is false

(B) Both (A) and (R) are true; and (R) is the correct explanation of (A)

(C) (A) is false, (R) is true

(D) Both (A) and (R) are true, but (R) is not the correct explanation of (A)

(E) Answer not known

178. _____ recommended democratic decentralization in India.

(A) S.N. Singh

(B) Balwantrai metha

(C) Vinoth Kalsari

(D) Rogers

(E) Answer not known

179. Knowing the reaction of the audience to a message disseminated.

(A) Feedback

(B) Message treatment

(C) Answer

(D) Review

(E) Answer not known

180. _____ is the process of influencing people to direct their efforts towards the attainment of goals.

- (A) Innovation
- (B) Incubation
- (C) Achievement
- (D) Leadership
- (E) Answer not known

181. Turning of eggs during incubation is

- (A) Every 3 hrs.
- (B) Every 8 hrs.
- (C) Every 24 hrs.
- (D) Every 12 hrs.
- (E) Answer not known

182. One carbon credit is equal to one metric tonne of

- (A) Carbon monoxide emission
- (B) Carbon dioxide emission
- (C) Methane emission
- (D) Nitrous oxide emission
- (E) Answer not known

183. Segregation of apparently healthy animals purchased from outside and kept for observation before introducing into a herd is termed as

- (A) Quarantine
- (B) Isolation
- (C) Vaccination
- (D) Elimination
- (E) Answer not known

184. Which of the following statements is NOT correct pertaining to castration in cattle?

- (A) Castration prevent male odour in meat
- (B) Castration improves meat production
- (C) Castration makes the animal docile
- (D) Castration improves the breeding performance
- (E) Answer not known

185. $I \frac{3}{3} C \frac{0}{1} PM \frac{4}{4} M \frac{3}{3}$ is a permanent dental formula for

- (A) Cattle
- (B) Buffalo
- (C) Horse
- (D) Pig
- (E) Answer not known

186. The most preferred system of housing for organic egg production is

- (A) Extensive system
- (B) Semi – intensive system
- (C) Deep litter system
- (D) Slatted floor system
- (E) Answer not known

187. Feedstuffs containing more than 18% crude fibre and less than 60% TDN are called as

- (A) Concentrate
- (B) Succulent feeds
- (C) Dry feed
- (D) Roughage
- (E) Answer not known

188. The sago industry by product used as livestock feed is

- (A) Molasses
- (B) Tapioca Starch waste
- (C) Corn Gluten meal
- (D) Tapioca thippi
- (E) Answer not known

189. 'Steaming up' feeding practice in dairy cattle is followed during

- (A) Mid lactation
- (B) Prior to calving
- (C) Prior to breeding
- (D) Early lactation
- (E) Answer not known

190. Which mineral is a constituent of Vit B₁₂?

- (A) Fluorine
- (B) Zinc
- (C) Copper
- ~~(D) Cobalt~~
- (E) Answer not known

191. In elephant, digestion of fibre occurs in

- ~~(A) Caecum and colon~~
- (B) Duodenum
- (C) Ileum
- (D) Stomach
- (E) Answer not known

192. In dogs and cats, cirrroses and fatty liver may develop due to deficiency of

- (A) Methionine
- (B) Glycine
- ~~(C) Choline~~
- (D) Taurine
- (E) Answer not known

193. The tendency of small population to decline toward extinction is referred as _____

- (A) Extinction loop
- (B) Extinction torque
- (C) Extinction Voyage
- ~~(D) Extinction Vortex~~
- (E) Answer not known

194. The type of Polymerase Chain Reaction in which the quantity of PCR product is measured after every cycle, allowing accurate estimation of the quantity of original template is called _____
- (A) Polymerase Chain Reaction (PCR)
 - ~~(B)~~ Real Time Quantitative PCR (Q-PCR)
 - (C) Reverse Transcription PCR (RT-PCR)
 - (D) Quantitative RT-PCR (RT-PCR)
 - (E) Answer not known
195. Hybridization of sample (labelled RNA or DNA) into immobilized DNA fragments on a solid surface is called
- (A) Serial Analysis of Gene Expression
 - ~~(B)~~ Microarrays
 - (C) Expressed Sequence Tags
 - (D) Mass Spectroscopy
 - (E) Answer not known
196. Within family selection can be effectively practiced in
- (A) Cattle and Buffalo
 - (B) Sheep and Goat
 - ~~(C)~~ Poultry and Pig
 - (D) Horse and donkey
 - (E) Answer not known

197. The value of an individual, judged by the mean value of its progeny is called the

- (A) Genotypic value of the individual
- (B) Breeding value of the individual
- (C) Phenotypic value of the individual
- (D) Average value of the individual
- (E) Answer not known

198. How many number of Chromosomes are present in a secondary spermatocyte of an Jersey cattle bull?

- (A) 30
- (B) 60
- (C) 25
- (D) 50
- (E) Answer not known

199. Avikalin strain of sheep was evolved by crossing

- (A) Rambouillet with chokla
- (B) Rambouillet with Malpura
- (C) Dorset with Malpura
- (D) Suffolk with Sonadi
- (E) Answer not known

200. Holandric Genes are located on

- (A) Homologous Region of X Chromosomes
 - (B) Non Homologous Region of X Chromosome
 - ~~(C)~~ Y Chromosome
 - (D) Autosomes
 - (E) Answer not known
-

