

1. In a dairy processing plant, closed containers like tanks and vats are easily and effectively sanitized through
 - (A) Hot water immersion
 - (B) Steam application
 - (C) Toggling by chemical sanitizers
 - (D) Brush application
 - (E) Answer not known

2. The Gerber's acid is used to estimate
 - (A) Total solids
 - (B) Fat percentage
 - (C) Mineral content
 - (D) Water adulteration
 - (E) Answer not known

3. Presence of extraneous water in milk is detected by
 - (1) Lowered fat percentage
 - (2) Lowered density of milk at 27°C
 - (3) Lowered percentage of solids not fat
 - (4) Freezing point depression
 - (A) (1), (2) and (3) are correct
 - (B) (2), (3) and (4) are correct
 - (C) (1), (2), (3) and (4) are correct
 - (D) (1), (3) and (4) are correct
 - (E) Answer not known

4. The Rosalic acid method is used for the detection of _____ in milk.
 - (A) Pond water
 - (B) Neutralizers
 - (C) Hypochlorites
 - (D) Chloramines
 - (E) Answer not known

5. Gravity traps are used to treat the waste water from dairy processing plant in order to reduce
- (A) Total solids
 - (B) BOD
 - (C) COD
 - (D) Fat, oil and grease
 - (E) Answer not known
6. Mayonnaise is a
- (A) Egg nog
 - (B) Semi-solid egg yolk based product
 - (C) Pickled egg
 - (D) Albumen ring
 - (E) Answer not known
7. As per Food Safety and Standards Act, 2006, refrigerated non-vegetarian products must be reheated to a minimum internal temperature of
- (A) 70°C
 - (B) 72°C
 - (C) 74°C
 - (D) 76°C
 - (E) Answer not known

8. As per the Food Safety and Standards (Packaging and Labelling) Regulation, 2011, every package of “Non Vegetarian” food shall bear a symbol
- (A) Brown colour filled circle, inside square with brown outline having sides
 - (B) Brown colour filled circle inside star with brown outline having sides
 - (C) Brown color filled circle inside square with red outline having sides
 - (D) Brown color filled circle inside star with red outline having sides
 - (E) Answer not known
9. _____ is examined for cysticercus bovis during postmortem inspection.
- (A) Triceps brachii
 - (B) Pectoral
 - (C) Lung
 - (D) Spleen
 - (E) Answer not known
10. Emergency slaughter is done in animals having
- (A) Acute pain
 - (B) Chronic illness
 - (C) Anthrax
 - (D) Black leg
 - (E) Answer not known
11. Dark firm dry meat normally occurs in
- (A) Cattle
 - (B) Pig
 - (C) Sheep
 - (D) Goat
 - (E) Answer not known

12. Which of the following statement(s) are true with respect to sterilized milk?

(I) Remarkable keeping quality

(II) Useful for feeding infants

(III) Possess 'rich' flavour

(IV) Devoid of vitamin 'C'

(A) (I), (II), (III)

(B) (I), (II), (IV)

(C) (I), (III), (IV)

(D) (II), (III), (IV)

(E) Answer not known

13. Best quality mozzarella cheese is made from

(A) Cow milk

(B) Goat milk

(C) Buffalo milk

(D) Sheep milk

(E) Answer not known

14. Which of the following statements are true about ghee?

(i) Ghee is a fat rich dairy product

(ii) Ghee is prepared from cream (or) butter

(iii) Granulation in ghee is due to the presence of palmitic and stearic acid

(A) (i) and (ii) only

(B) (i) and (iii) only

(C) (i), (ii) and (iii)

(D) (ii) and (iii) only

(E) Answer not known

15. Choose the average boiling point of buffalo milk
- (A) 101°C (B) 100.5°C
(C) 101.5°C (D) 100°C
(E) Answer not known
16. From which animal's submucosa layer of the intestine, the suture catgut is prepared?
- (A) Cattle (B) Sheep
(C) Horse (D) Pig
(E) Answer not known
17. Curing of meat is done by adding
- (A) Salt, Cream and butter
(B) Salt, Sugar and Nitrate (or) Nitrite
(C) Salt, Glycerol and Ethyl gallate
(D) Salt, Potassium chloride and Sorbate
(E) Answer not known
18. During, tanning operation, bating enzymes act on the
- (A) Collagen (B) Epidermis
(C) Tendons (D) Fat
(E) Answer not known
19. Cholic acid is obtained from
- (A) Adrenal gland (B) Bile
(C) Pancreas (D) Liver
(E) Answer not known

20. The blue discolouration in milk is caused by the associative action of
- (A) *Streptococcus lactis* and *leuconostoc* spp.
 - (B) *Streptococcus lactis* and *pseudomonas syncyanea*
 - (C) *Candida pseudotropicalis* and *leuconostoc* spp.
 - (D) *Torulopsis sphaerica* and *candida pseudotropicalis*
 - (E) Answer not known
21. Which of the following is incorrectly paired?
- (1) Fruity flavor of milk – *Pseudomonas fragi*
 - (2) Musty potato flavor of milk – *Pseudomonas taetrolens*
 - (3) Malty flavor of raw milk – *Streptococcus lactis* var *maltigenes*
 - (4) Blue discoloration in milk – *Candida* spp
- (A) (1), (2) and (3)
 - (B) (2) and (3)
 - (C) (1) and (2)
 - (D) (4) only
 - (E) Answer not known
22. As per food safety and standards (Food products standards and food additives) regulations, 2011 the total urea content in milk should not exceed
- (A) 300 ppm
 - (B) 500 ppm
 - (C) 700 ppm
 - (D) 900 ppm
 - (E) Answer not known

23. The acidity at which the milk sours is usually in the range of _____ (as Lactic acid)
- (A) 0.14 to 0.16% (B) 0.20 to 0.25%
(C) 0.30 to 0.45% (D) 0.50 to 0.65%
(E) Answer not known
24. As per BIS standard, Ghee should contain _____ % fat
- (A) 60% (B) 70%
(C) 80% (D) 99.5%
(E) Answer not known
25. Mc Fadyean's reaction blue rods in short chain with pink capsules on stained smear is characteristic of
- (A) Anthrax (B) Tetanus
(C) Leptospirosis (D) Tuberculosis
(E) Answer not known
26. Avian influenza (or) Bird flu is caused by
- (A) H5N1 (B) H5N2
(C) H5N3 (D) H5N4
(E) Answer not known
27. Azurophils is a unique type of blood cells identified only in
- (A) Reptiles (B) Amphibians
(C) Birds (D) Mammals
(E) Answer not known

28. Hook worm vaccine contains
- (A) X ray irradiated worms
 - (B) X ray irradiated macroschizont
 - (C) X ray irradiated endosperm
 - (D) X ray irradiated larvae
 - (E) Answer not known
29. Dogs zoonotic disease causing retinal damage in humans is
- (A) Trichinosis
 - (B) Toxoplasmosis
 - (C) Cutaneous larval migrans
 - (D) Visceral larval migrans
 - (E) Answer not known
30. Swimmers itch an allergic syndrome caused by cercariae can be controlled by
- (A) Corticosteroid cream
 - (B) Cool compresses
 - (C) Anti-itch preparations
 - (D) Molluscicides
 - (E) Answer not known
31. Arthropods mediated transmission in which infectious agents transmitted from one development stage to another is called
- (A) Transovarian
 - (B) Transstadial
 - (C) Hereditary
 - (D) Stercorarian
 - (E) Answer not known

32. In disease transmission, the etiological agent multiplies in the vector is called as
- (A) Mechanical Transmission (B) Propagative Transmission
 (C) Developmental Transmission (D) Vertical Transmission
 (E) Answer not known
33. The factor in which the susceptibility of host to a disease is increasing?
- (A) Enabling factor (B) Precipitating factor
 (C) Reinforcing factor (D) Predisposing factor
 (E) Answer not known
34. Match the following :
- Match the disease with their clinical signs
- | | |
|----------------------------------|----------------------------|
| (a) Infectious Laryngotracheitis | 1. Thick leg syndrome |
| (b) EDS 76 | 2. Red leg syndrome |
| (c) Lymphoid Leukosis | 3. Soft-shelled eggs |
| (d) Marek's Disease | 4. Pump handle respiration |
-
- | | | | | |
|-----|-----|-----|-----|-----|
| | (a) | (b) | (c) | (d) |
| (A) | 4 | 1 | 2 | 3 |
| (B) | 3 | 1 | 4 | 2 |
| (C) | 4 | 3 | 1 | 2 |
| (D) | 3 | 2 | 4 | 1 |
- (E) Answer not known

35. Gumboro disease (IBD) is called by
- (A) Birna virus (B) Adeno virus
(C) Rhabdo virus (D) Paramyxo virus
(E) Answer not known
36. Number of serotyper present in blue tongue virus
- (A) 23 (B) 27
(C) 18 (D) 25
(E) Answer not known
37. The strain of Brucella abortus used in calfhooed vaccine to control bovine brucellosis in India is
- (A) B. abortus strain S99 (B) B. abortus strain S19
(C) B. melifensis strain Rev1 (D) B. abortus strain RB51
(E) Answer not known
38. Which of the following is incorrectly paired?
- (1) Clostridium septicum – Braxy
(2) Clostridium novyi – Black leg
(3) Clostridium chauvoei – Black disease
(4) Clostridium perfringens – Enterotoxemia
- (A) (2) and (3) (B) (1) and (3)
(C) (3) and (4) (D) (1) and (4)
(E) Answer not known

39. Thin layer of peptidoglycan is present in
- (A) Gram +ve bacteria (B) Gram –ve bacteria
(C) Archaea (D) Mycobacteria
(E) Answer not known
40. Which of the following is not the property of mycotoxins?
- (A) Low molecular weight compounds
(B) Immunogenic compound
(C) Heat stable substances
(D) Secondary fungal metabolites
(E) Answer not known
41. Bovine Dermatophytosis is usually caused by
- (A) Trichophyton equinum (B) Microsporum gallinae
(C) Trichophyton simii (D) Trichophyton verrucosum
(E) Answer not known
42. Which of the following is not a green house gas?
- (A) CO₂ (B) H₂
(C) CH₄ (D) CFC
(E) Answer not known
43. The international treaty which is related with ozone depletion is
- (A) Ramsar convention (B) Kyoto protocol
(C) Montreal protocol (D) London convention
(E) Answer not known

44. Byssinosis is caused by the inhalation of
- (A) Coal dust
 - (B) Cotton dust
 - (C) Sugarcane dust
 - (D) Silicate dust
 - (E) Answer not known
45. Red nose is caused by
- (A) Blue tongue
 - (B) Mucosal disease
 - (C) Infectious bovine rhinotracheitis
 - (D) Pox
 - (E) Answer not known
46. Assertion (A) : Blood smell from the tip of ear that is on the lower side of animal carcass is taken to rule out anthrax.
- Reason (R) : Because of gravity all blood would have drained from the ear on the upper side.
- (A) (A) is true, and (R) is false
 - (B) (A) is false, and (R) is true
 - (C) Both (A) and (R) are true, and (R) is the correct explanation of (A)
 - (D) Both (A) and (R) are true, and (R) is not the correct explanation of (A)
 - (E) Answer not known

47. Collection of pus locally within a closed cavity in an organ or tissue is called
- (A) Sinus (B) Abscess
(C) Fistula (D) Pustule
(E) Answer not known
48. Edema is caused due to
1. Increased capillary permeability of the capillary endothelium
 2. Increase in plasma proteins
 3. Increase in colloid osmotic pressure of the blood
 4. Decreased hydrostatic pressure of blood
- (A) 1 only (B) 1 and 2
(C) 1, 2 and 4 (D) 1 and 3
(E) Answer not known
49. The primary immunosuppressive disease in poultry include(s)
1. Infectious bursal disease
 2. Fowl pox
 3. Chicken infectious anaemia
 4. Epidemic tremor
- (A) 1 and 4 are correct (B) 1 and 3 are correct
(C) 2 and 3 are correct (D) 2 and 4 are correct
(E) Answer not known

50. Rectal pinch smear is used for diagnose of
- (A) Tuberculosis
 - (B) Johne's disease
 - (C) Haemorrhagic septicaemia
 - (D) Pesti de pesti ruminantia
 - (E) Answer not known
51. Carcinoma is defined as malignant tumor of
- (A) muscle
 - (B) horn
 - (C) epithelial tissue
 - (D) blood
 - (E) Answer not known
52. At post-mortem examination of birds, liver showed multifocal necrotic foci, multiple petechiae on heart, blood smear revealed bipolar organisms. The disease diagnosis is
- (1) Escherichia coli
 - (2) Salmonella
 - (3) Streptococci
 - (4) Corynebacterium
- (A) (1) is correct and (2), (3), (4) are false
 - (B) (2) is correct and (1), (3), (4) are false
 - (C) (3) is correct and (1), (2), (4) are false
 - (D) All (1), (2), (3), (4) are false statements
 - (E) Answer not known

58. Which of the following is not an ideal requirement for a local anesthetic?
- (A) should produce reversible paralysis of sensory nerves
 - (B) should have non-addictive properties
 - (C) should be readily soluble in water
 - (D) should be systemically absorbed quickly
 - (E) Answer not known
59. The role of bovines in the life cycle of Taenia saginata
- (A) Final host
 - (B) Intermediate host
 - (C) Paratenic host
 - (D) Carrier host
 - (E) Answer not known
60. The sporulated oocysts of cryptosporidium possess
- (A) No sporocysts, eight sporozoites
 - (B) Two sporocysts each containing four sporozoites
 - (C) Four sporocysts each containing two sporozoites
 - (D) Four sporozoites not enclosed in a sporocyst
 - (E) Answer not known
61. A farmer reports resistance in Haemonchus Contortus to Fenbendazole in his Flock. As there is anthelmintic resistance to Fenbendazole what alternate drug can be used?
- (A) Albendazole
 - (B) Febantel
 - (C) Levamisole
 - (D) Thiabendazole
 - (E) Answer not known

62. Match the following parasites with their location in animals

- | | |
|--|---------------|
| (a) <u>Oesophagostomum Columbianum</u> | 1. Liver |
| (b) <u>Fasciola gigantica</u> | 2. Desophagus |
| (c) <u>Spirocerca Lupi</u> | 3. Colon |
| (d) <u>Stephanurus dentatus</u> | 4. Kidney |

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

63. Bursati in hores is caused by Larvae of

- | | |
|----------------------------------|--------------------------------|
| (A) <u>Oxyuris equi</u> | (B) <u>Strongylus Vulgaris</u> |
| (C) <u>Onchocerca Cervicalis</u> | (D) <u>Draschia Megastoma</u> |
| (E) | Answer not known |

64. Sulphur yellow coloured dropping is the characteristic clinical sign in Turkeys infected with

- | | |
|-----------------------------------|-----------------------------------|
| (A) <u>Trichomonas Gallinae</u> | (B) <u>Hexamita Meleagridis</u> |
| (C) <u>Histomonas Meleagridis</u> | (D) <u>Chilomastix gallinarum</u> |
| (E) | Answer not known |

65. Renal impression is absent in the liver of

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

66. The following salivary gland is present only in Dog.
- (A) Zygomatic gland (B) Sublingual gland
(C) Mandibular gland (D) Maxillary gland
(E) Answer not known
67. The right atrio–ventricular orifice of the heart is guarded by
- (A) Foramen ovale (B) Bicuspid valve
(C) Conus arteriosus (D) Tricuspid valve
(E) Answer not known
68. The pulmonary veins opens into the root of the
- (A) Right Atrium (B) Left Ventricle
(C) Left Atrium (D) Right Ventricle
(E) Answer not known
69. The foramen ovule connects the
- (A) Right and Left Atrium (B) Right and Left Ventricle
(C) Right Atrium and Ventricle (D) Left Atrium and Ventricle
(E) Answer not known
70. Absolute deficiency of Insulin is observed in
- (A) Pituitary Diabetes
(B) Adrenal Diabetes
(C) Insulin Dependent Diabetes
(D) Non–Insulin Dependent Diabetes
(E) Answer not known

71. Consider the statements and choose the correct one.
- (1) Rothera test is most sensitive to acetone
 - (2) Rothera test is most sensitive to acetic acid
 - (3) Rothera test is most sensitive to β -Hydroxybutyric acid
 - (4) Rothera test is most sensitive to acetoacetic acid
- (A) Statement (1) is correct (B) Statement (2) is correct
(C) Statement (3) is correct (D) Statement (4) is correct
(E) Answer not known
72. Estimation of C-Peptide in plasma serves as a useful index to assess the production of
- (A) Exogenous Insulin Level
 - (B) Endogenous Insulin Level
 - (C) Prepro Insulin Level
 - (D) Pro Insulin Level
 - (E) Answer not known
73. Ammoniotelic animals are
- (A) Fishes and Frogs
 - (B) Reptiles and Birds
 - (C) Ruminants
 - (D) Non-Ruminants
 - (E) Answer not known

74. Conjugated bilirubin level is elevated in
- (A) Prehepatic jaundice
 - (B) Post hepatic jaundice
 - (C) Hepatic jaundice
 - (D) Haemolytic jaundice
 - (E) Answer not known
75. Mammary lobule areolar growth is stimulated by
- (A) Estrogen
 - (B) Progesterone
 - (C) Prostaglandins
 - (D) Oxytocin
 - (E) Answer not known
76. Lipolysis in the adipose tissue is stimulated by all the following hormones, except
- (A) Growth hormone
 - (B) Glucocorticoids
 - (C) Glucagon
 - (D) Insulin
 - (E) Answer not known
77. Functional Residual Capacity (FRC) is calculated by adding
- (A) Tidal volume and residual volume
 - (B) Inspiratory reserve volume and expiratory reserve volume
 - (C) Tidal volume and expiratory reserve volume
 - (D) Expiratory reserve volume and residual volume
 - (E) Answer not known

78. In the electrocardiogram 'QRS' complex represents
- (A) Ventricular Depolarization
 - (B) Atrial Depolarization
 - (C) Atrial Repolarization
 - (D) Ventricular Repolarization
 - (E) Answer not known
79. Blood does not clot intravascularly due to all of the following, except
- (A) Positively charged endothelial surface
 - (B) Presence of heparin
 - (C) Presence of Protein C and antithrombin
 - (D) Presence of Thrombomodulin
 - (E) Answer not known
80. The functional unit of the enzyme is known as
- (A) Monomeric enzyme
 - (B) Oligomeric enzyme
 - (C) Multi enzyme
 - (D) Holo enzyme
 - (E) Answer not known
81. Which one of the following Enzyme is a reliable indicator of Hepatocellular Injury in Dogs and Cats?
- (A) AST
 - (B) ALT
 - (C) ALP
 - (D) ACP
 - (E) Answer not known

82. Serum Amylase is used as a screening test for
- (A) Acute Hepatitis (B) Acute Gastritis
(C) Acute Pancreatitis (D) Acute Enteritis
(E) Answer not known
83. The end product of Glycolysis under Anaerobic condition is –
- (A) Citric Acid (B) Pyruvic Acid
(C) Succinic Acid (D) Lactic Acid
(E) Answer not known
84. Most of the Co-Enzymes, are Derivatives of
- (A) Vitamin A (B) Vitamin B complex
(C) Vitamin C (D) Vitamin D
(E) Answer not known
85. Floor space requirement for cow is
- (A) 3.5 m² covered area, 7.0 m² open area
(B) 7.0 m² covered area, 3.5 m² open area
(C) 12.0 m² covered area, 12.0 m² open area
(D) 4.0 m² covered area, 8.0 m² open area
(E) Answer not known
86. ‘Sickle shaped Horns’ is a breed character of
- (A) Jaffarabadi Buffalo (B) Nagpuri Buffalo
(C) Toda Buffalo (D) Surti Buffalo
(E) Answer not known

87. Ducks belong to the family of
- (A) Cervidae (B) Anatidae
 (C) Phasianidae (D) Capridae
 (E) Answer not known
88. In order to avoid maximum solar radiation during summer months, the long axis of the cattle shed should be constructed with
- (A) North-South orientation (B) South-West orientation
 (C) North-East orientation (D) East-west orientation
 (E) Answer not known
89. An Ideal loose house box dimension should be
- (A) 7.25×7.25 m (B) 7.00×7.00 m
 (C) 7.50×7.50 m (D) 8.25×8.25 m
 (E) Answer not known
90. Match the correct floor space (sq.cm.) requirement of different laboratory animals:
- | | | |
|----------------|----|-----------|
| (a) Mouse | 1. | 300-600 |
| (b) Rat | 2. | 3700-4600 |
| (c) Guinea Pig | 3. | 65-100 |
| (d) Rabbit | 4. | 100-150 |
- | | | | | |
|-----|-----|-----|-----|-----|
| | (a) | (b) | (c) | (d) |
| (A) | 2 | 1 | 4 | 3 |
| (B) | 4 | 3 | 2 | 1 |
| (C) | 3 | 4 | 1 | 2 |
| (D) | 1 | 2 | 3 | 4 |
- (E) Answer not known

91. Choose the Right answer

- (1) In pasture mating, the stallion is turned out with a band of mares for the entire breeding season.
 - (2) In corral mating, the stallion is turned out with mare and taken out after breeding.
 - (3) Artificial insemination is increasingly used with horses including thoroughbred horses.
 - (4) Hand mating is the least preferred method of breeding in horses.
- (A) (1), (2) and (3) are correct (B) (2), (3) and (4) are correct
(C) (1) and (2) are correct (D) (3) and (4) are correct
(E) Answer not known

92. The best breeding season for horses in India

- (A) Spring (B) Monsoon
(C) Summer (D) Winter
(E) Answer not known

93. Assertion [A] : Inbreeding is the most common problem in captive animal breeding program.

Reason [R] : The foundation stock in most of the zoos are very small, inbreeding often happen unless care is taken.

- (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

94. The age of Disbudding in calves is

- (A) 12-14 days
- (B) 3-10 days
- (C) 1-2 days
- (D) 14-16 days
- (E) Answer not known

95. Flushing for ewes has to be carried out _____ before breeding.

- (A) 1 to 2 weeks
- (B) 2 to 3 weeks
- (C) 3 to 4 weeks
- (D) 4 to 5 weeks
- (E) Answer not known

96. Which one of the following is incorrectly paired?
- (A) Angora goat – Pashmina production
 - (B) Anglo-Nubian goat – Jersey of cow
 - (C) Black Bengal goat – Excellent skin quality
 - (D) Nellore sheep – Tallest sheep of India
 - (E) Answer not known
97. Which of the following body part is best for branding?
- (A) Lower part of thigh
 - (B) Upper edge of ear
 - (C) Both (A) and (B)
 - (D) None of the above
 - (E) Answer not known
98. Breed of buffalo not originate from Gujarat
- (A) Surti
 - (B) Murrah
 - (C) Mehsana
 - (D) Jaffarabadi
 - (E) Answer not known
99. Average daily amount of dung voided by the pigs in range is
- (A) 2-3 kg
 - (B) 3-5 kg
 - (C) 5-6 kg
 - (D) 7-9 kg
 - (E) Answer not known
100. In breeding boar the motility of sperm immediately after collection should be
- (A) 50 to 60 percent
 - (B) 60 to 70 percent
 - (C) 70 to 80 percent
 - (D) 80 to 90 percent
 - (E) Answer not known

101. To improve the reproductive performance of the pigs, boar should be provided
- (A) Individual sty
 - (B) Individual sty in the vicinity of gilt pens
 - (C) Individual sty away from the gilt pens
 - (D) Individual sty in the vicinity of gilt and sow pens
 - (E) Answer not known
102. The scientific name of pigmy hog
- (A) *Sus serofa*
 - (B) *Sus cristatus*
 - (C) *Sus domesticus*
 - (D) *Sus salvanius*
 - (E) Answer not known
103. An important factor responsible for production of large amount of pork from non descript pig in India
- (A) Cross breeding with bacon type swine breed
 - (B) Cross breeding with lard type swine breed
 - (C) Cross breeding with exotic swine breed
 - (D) Cross breeding with the best indigenous swine breed
 - (E) Answer not known
104. The per capita availability of meat in India during 2022-23 was
- (A) 7.10 kg/annum
 - (B) 8.10 kg/annum
 - (C) 9.10 kg/annum
 - (D) 9.60 kg/annum
 - (E) Answer not known

108. The TOT project of ICAR that is implemented with the specific objective to test, adopt and demonstrate the new agricultural technology on farmer's fields is
- (A) Operational research project (B) National demonstrations
(C) Lab to land programme (D) Operation flood
(E) Answer not known
109. According to Aristotle, communication has the following ingredients. Choose the correct answer
- (i) Speaker – Speech – Audience
(ii) Source – Encoder – Audience
(iii) Communicator – Decoder – Response
(iv) Speaker – Audience
- (A) (i) is correct (B) (i) and (ii) are correct
(C) (iii) is correct (D) (iv) is correct
(E) Answer not known
110. The degree to which an innovation is perceived as being better than the idea it supersedes is called its
- (A) Complexity (B) Observability
(C) Predictability (D) Relative advantage
(E) Answer not known

111. Relative speed with which an innovation is adopted by members of a social system is called

- (A) Rate of adoption
- (B) Innovativeness
- (C) Diffusion
- (D) Implementation
- (E) Answer not known

112. Choices to adopt or reject an innovation that are made by an individual independent of the decisions of the other members of the social system is called

- (A) Optional innovation decision
- (B) Collective innovation decision
- (C) Authority innovation decision
- (D) Rational innovation decision
- (E) Answer not known

113. Match correctly the adopter categories with their corresponding characteristics :

- | | |
|--------------------|-----------------------|
| (a) Innovators | 1. Opinion leadership |
| (b) Early adopters | 2. Venturesome |
| (c) Laggards | 3. Deliberate |
| (d) Early Majority | 4. Traditional |

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

114. The form of decision of an innovation which consists of considering adoption of the innovation, but then deciding not to adopt is called
- (A) Passive rejection
 - (B) Discontinuance
 - (C) Disenchantment discontinuance
 - (D) Active rejection
 - (E) Answer not known
115. Distribution of functions and powers from a central authority to regional and local authorities is called
- (A) Decentralization
 - (B) Centralization
 - (C) Bureaucracy
 - (D) Coordination
 - (E) Answer not known
116. One of the following is not an element in a learning situation
- (A) Learners
 - (B) Subject matter
 - (C) Physical facilities
 - (D) Supervision
 - (E) Answer not known
117. Choose the right matches of the following :
- 1. Primary group – intimate face to face interaction
 - 2. Secondary group – informally organised relationships
 - 3. Formal group – definite role
 - 4. Voluntary group – no choice for membership
- (A) 1 and 3 are correct
 - (B) 1 and 2 are correct
 - (C) 2 and 3 are correct
 - (D) 3 and 4 are correct
 - (E) Answer not known

118. The established behaviour patterns for the members of a social system is called
- (A) Folkways (B) Norms
(C) Laws (D) Mores
(E) Answer not known
119. When the rate of change in a social system is too rapid or undesirable to permit the social system to adjust, the pattern of change is called?
- (A) Stable equilibrium (B) Dynamic equilibrium
(C) Disequilibrium (D) Unstable equilibrium
(E) Answer not known
120. Match correctly the earlier extension efforts with the person responsible for the implementation of the same :
- | | |
|---------------------------|-----------------------------|
| (a) Work at Shantiniketan | 1. F.L. Brayne |
| (b) Etawah Pilot Project | 2. S.K. Dey |
| (c) Nilokheri Experiment | 3. Albert Mayer |
| (d) Gurgaon Experiment | 4. Shri Rabindranath Tagore |
- | | | | | |
|-----|------------------|-----|-----|-----|
| | (a) | (b) | (c) | (d) |
| (A) | 1 | 4 | 3 | 2 |
| (B) | 4 | 3 | 2 | 1 |
| (C) | 3 | 2 | 4 | 1 |
| (D) | 2 | 1 | 4 | 3 |
| (E) | Answer not known | | | |

121. A diversified farm is one on which the farmer derives income from several sources, but income from no single source is more than
- (A) 50% (B) 10%
(C) 25% (D) 15%
(E) Answer not known
122. The third step in the extension educational process is
- (A) Evaluation (B) Teaching
(C) Reconsideration (D) Situation analysis
(E) Answer not known
123. The basic philosophy of extension education is to teach people
- (A) how to think, not what to think
(B) how to think and what to think
(C) how to act and where to act
(D) how to use and when to use
(E) Answer not known
124. The lifelong process by which every person acquires and accumulates knowledge, skills, attitudes and insights from daily experiences and exposure to environment is called
- (A) Formal Education (B) Informal Education
(C) Non-formal Education (D) Extension Education
(E) Answer not known

125. Which of the following norms of Central Zoo Authority related to protection and conservation of wildlife is incorrect?
- (A) Zoo shall not exhibit any sick or injured animal
 - (B) Zoo's built up area shall not exceed 25% of the total area of the zoo
 - (C) Zoo's must have residential complexes for staff with in it's campus
 - (D) Zoo shall be closed to visitors atleast once a week
 - (E) Answer not known
126. In making a diagnosis of fatty liver, which among the following is incorrect
- (A) Increase in the serum NEFA levels
 - (B) Increase in cholesterol level
 - (C) Increase in BHBA levels
 - (D) Increase in serum bilirubin levels
 - (E) Answer not known

129. Colour of the mucous membrane of the cattle affected with in (HCN) Hydrocyanic acid and poisoning is

- (A) Chocolate (B) Bright red
(C) Dark red (D) Pink
(E) Answer not known

130. Flehmen's reaction is absent in

- (A) Bovine (B) Ovine
(C) Equine (D) Swine
(E) Answer not known

131. Match the Hormone with its role in reproduction :

- | | |
|------------------|----------------------------------|
| (a) FSH | 1. Ovulation |
| (b) LH | 2. Maintenance of pregnancy |
| (c) Estrogen | 3. Follicular development |
| (d) Progesterone | 4. Manifestation of Estrus signs |

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

132. The first postpartum ovulation is to be 'Silent Ovulation' in most of the cows because of
- (A) Lack of follicle
 - (B) Excess progesterone secretion
 - (C) Lack of estrogen priming
 - (D) Lack of progesterone priming
 - (E) Answer not known
133. Except in drug, the fertile life of ovulated ova in domestic animals is relatively about
- (A) 12-24 hours
 - (B) 26-48 hours
 - (C) 48-96 hours
 - (D) 96-120 hours
 - (E) Answer not known
134. The day of embryo collection in cattle is _____ from Estrus.
- (A) 7 days
 - (B) 8 days
 - (C) 9 days
 - (D) 10 days
 - (E) Answer not known
135. Incomplete dilatation of the cervix in ewe is termed as
- (A) Cloud burst
 - (B) Ringwomb
 - (C) Wry neck
 - (D) Ankylosis
 - (E) Answer not known

136. Match the list I with List II

List I (Species)		List II (Type of placenta)	
(a) Primates		1. Diffuse type of placenta	
(b) Bitch		2. Discoid type of placenta	
(c) Ewe		3. Cotyledonary type of placenta	
(d) Mare		4. Zonary type of placenta	

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

137. One of the following is not related to Brucellosis

- (A) Abortion in last trimester
- (B) Non-suppurative synovitis
- (C) Retained placenta
- (D) Abortion in most of the subsequent pregnancies
- (E) Answer not known

138. By recto-vaginal method of insemination in cows, the AI catheter is initially inserted pointing upwards at an angle of about 30° to

- (A) Avoid cervical folds
- (B) Avoid fornix
- (C) Avoid cervical mucus
- (D) Avoid urethral meatus
- (E) Answer not known

139. The 'S' shaped structure along the shaft of the penis that aids in penile erection in bulls is
- (A) Retractor penis muscle
 - (B) Ischiocavernosus muscle
 - (C) Corpus spongiosum
 - (D) Sigmoid flexure
 - (E) Answer not known
140. Nerve block applied for Rumenotomy is
- (A) Epidural nerve block
 - (B) Cornual nerve block
 - (C) Paravertebral nerve block
 - (D) Subarachnoid nerve block
 - (E) Answer not known
141. Which one of the following is an objective means of roughly evaluating the size of cardiac silhouette in x ray
- (A) Norberg angle
 - (B) Vertebral heart scale
 - (C) Thoracic heart size
 - (D) Thoraw-diaphragmatic angle
 - (E) Answer not known
142. A tubular inflammatory tract open at both ends connecting two surfaces covered by epithelium (or) mesothelium.
- (A) Fistula
 - (B) Sinus
 - (C) Necrosis
 - (D) Gangrene
 - (E) Answer not known

143. Choose the right matches among type given

- (1) Frog like posture in cow with hind legs flexed – Peritonitis
- (2) Calf unable to extend the fetlock joint – Impactive colic
- (3) Frog like posture in a cow with extender hind limbs – Rupture of abductor muscles
- (4) A cow standing in arched sack – Bilateral hip dysplastic conductors with tensed abdomen
- (A) (1) (B) (2)
- (C) (4) (D) (3)
- (E) Answer not known

144. Choose the right matches among the following

- (1) Balanitis – Inflammation of the glans penis
- (2) Posthitis – Inflammation of the prepuce
- (3) Phallocampsis – Inability to withdraw the penis
- (4) Paraphimosis – Deviation of the penis
- (A) (1) and (3) are correct (B) (1) and (2) are correct
- (C) (2) and (3) are correct (D) (3) and (4) are correct
- (E) Answer not known

145. Mating of F_1 to Homozygous recessive parent is called as

- (A) Test crossing (B) Back crossing
- (C) Cris-crossing (D) Rotational crossing
- (E) Answer not known

146. Choose the wrong matches

Which of the following is incorrectly paired?

- (1) Mule – Cross between male horse and female donkey
- (2) Yattle – Cross between a cow and a yak
- (3) Yakalo – Cross between yak and buffalo
- (4) Tigon – Cross between male lion and female tiger
- (A) (1) and (2) are incorrect (B) (1) and (3) are incorrect
- (C) (2) and (3) are incorrect (D) (1) and (4) are incorrect
- (E) Answer not known

147. Ex-situ conservation is

- (i) Preservation of sperms and Oocytes
- (ii) Storage of DNA
- (iii) Cloning of somatic cells
- (iv) Live animal conservation (In-vivo)
- (A) (i) and (ii) (B) (i), (ii) and (iv)
- (C) (ii), (iii) and (iv) (D) (i), (ii), (iii) and (iv)
- (E) Answer not known

148. The mammalian species which is recorder to have the highest number of “breeds at risk” category is

- (A) Cattle (B) Sheep
- (C) Goat (D) Pig
- (E) Answer not known

149. Heritability for a Quantitative trait is the measure of Degree of relationship of
- (A) Additive genetic value on phenotypic value
 - (B) Dominance Deviation on Phenotypic value
 - (C) Environmental Deviation on Phenotypic value
 - (D) Additive Genetic value on Genotypic value
 - (E) Answer not known
150. The amount of Heterosis depends on
- (i) Presence of Dominance Effect
 - (ii) Genetic differences between parental population
 - (iii) Environment similarity
- (A) (i) only
 - (B) (i) and (iii) only
 - (C) (ii) and (iii) only
 - (D) (i) and (ii) only
 - (E) Answer not known
151. Which of the following statement are true about marker's assisted selection in animal breeding programme
- (i) It is easily detectable using molecular technique.
 - (ii) It is closely linked to the gene of interest.
 - (iii) It is also served as morphological marker.
- (A) (i) only
 - (B) (i) and (ii) only
 - (C) (ii) and (iii) only
 - (D) (i) and (iii) only
 - (E) Answer not known

152. The amplified fragment length polymorphism (AFLP) is an intermediate technique between

- (A) RFLP and RAPD
- (B) PCR and AP-PCR
- (C) DAF and MAAP
- (D) STR and STMR
- (E) Answer not known

153. Large white Yorkshire is originated from

- (A) England
- (B) Denmark
- (C) United States
- (D) Germany
- (E) Answer not known

154. Match the correct bird classes with their corresponding breed

- | | |
|-------------------------|------------------|
| (a) American class | 1. Cornish |
| (b) Asiatic class | 2. Minorca |
| (c) English class | 3. Langshan |
| (d) Mediterranean class | 4. Plymouth rock |

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

155. The genetic parameter involved to assess the future performance of the animals having multiple measurements, is
- (A) Repeatability (B) Genetic correlation
(C) Heritability (D) None of the above
(E) Answer not known
156. The change in performance from parent to progeny generation for the trait, which is not being actually selected is known as
- (A) Correlated response (B) Direct response
(C) Response to selection (D) None of the above
(E) Answer not known
157. As per the National Livestock Policy, (2013) a maximum level of exotic germ plasm encouraged in crossing of pigs would be
- (A) 35% (B) 65%
(C) 50% (D) 75%
(E) Answer not known
158. The co-ordinating unit of All India Co-ordinated Research Project (AICRP) on goat is located at
- (A) RAJUVAS, Udaipur, Rajasthan
(B) CIRG, Makhdoom, Uttarpradesh
(C) MPKV, Rahuri, Maharashtra
(D) Navsari Agricultural University, Gujarat
(E) Answer not known

159. If the C-effect is high, which of the following basis of selection is preferred?
- (A) Family selection (B) Within family selection
(C) Pedigree selection (D) Individual selection
(E) Answer not known
160. A selection which improves both GCA (General Combining Ability) and SCA (Specific Combining Ability) is
- (A) Recurrent selection
(B) Reciprocal recurrent selection
(C) Truncation selection
(D) Indirect selection
(E) Answer not known
161. The number of nitrogenous bases in DNA codes a specific amino acid of polypeptide chain is
- (A) 4 (B) 2
(C) 3 (D) 1
(E) Answer not known
162. The process of removal of non – coding sequences interspersed within the coding sequences of pre – mRNA is known as
- (A) Splicing (B) Degeneration
(C) Catalysis (D) Prouning
(E) Answer not known

166. The quantity of fodder (kg) that can be accommodated in pit silo of 10 cubic meter size during ensiling process
- (A) 1000 (B) 2000
(C) 3000 (D) 4000
(E) Answer not known
167. Major constraint in incorporation of cotton seed in the animal feed is the presence of
- (A) Tannin (B) Gossypol
(C) Haemagglutinin (D) Ricin
(E) Answer not known
168. The wild animal requires arachidonic acid supplementation in feed is
- (A) Deer (B) Elephant
(C) Fox (D) Tiger
(E) Answer not known
169. The amino acid deficiency will lead to death in wild cats is
- (A) Lysine (B) Methionine
(C) Arginine (D) Tryptophan
(E) Answer not known

170. Assertion [A] : When hard, coarse or fibrous feeds are fed to poultry, grit is sometimes added to supply additional surface for grinding within gizzard.

Reason [R] : Poultry do not have teeth to grind and hard grain, most grinding takes place in the thick muscled gizzard.

- (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 but [R] is true
- (D) Both [A] and [R] are true but [R] is not the correct explanation of [A]
- (E) Answer not known

171. Match the following type : Match correctly the deficiency symptoms with corresponding vitamin deficiency :

- | | |
|--------------------------|--------------------------------|
| (a) Goose step walk | 1. Niacin Deficiency |
| (b) Black tongue | 2. Thiamin Deficiency |
| (c) Curled-Toe Paralysis | 3. Pantothenic acid Deficiency |
| (d) Polyneuritis | 4. Riboflavin Deficiency |

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

172. Choose the right answer

As per BIS specifications, AIA level in type I cattle feeds

- (A) Maximum 3%
- (B) Minimum 3%
- (C) Maximum 4%
- (D) Minimum 4%
- (E) Answer not known

173. Nitrate poisoning is related to which one of the following

- (A) Vitamin
- (B) Egg albumin
- (C) Glucose
- (D) Haemoglobin
- (E) Answer not known

174. The crude protein content of cereal grains varies between

- (A) 4-6%
- (B) 8-12%
- (C) 15-18%
- (D) 0-3%
- (E) Answer not known

175. Additional amount of DCP and TDN requirement for cattle and buffaloes of 350 kg to 500 kg body weight per day during last trimester of gestation (ICAR, 1998) is

- (A) 90-130g DCP and 1.0-1.1 kg TDN
- (B) 150-200g DCP and 1.5-2.0 kg TDN
- (C) 50-100 g DCP and 0.75-1.0 kg TDN
- (D) 50-100 g DCP and 2.0-2.5 kg TDN
- (E) Answer not known

176. Consider the following statements about the rumen environment of ruminants.

(i) The liquid phase of rumen content has a pH between 4.8 to 5.8 under normal physiological condition.

(ii) The pH of reticulo rumen is maintained at fairly constant level by the alkalinity of large volume of saliva entering the rumen.

(iii) The pH of rumen may rise to pH 7.5 or more on intake as very poor roughage by ruminants.

(A) (i) and (ii) only

(B) (ii) and (iii) only

(C) (i) and (iii) only

(D) (i), (ii) and (iii)

(E) Answer not known

177. _____ is an indication of level of cooking or processing applied during the preparation of soybean meal.

(A) Protease activity

(B) Urease activity

(C) Protein content

(D) Colour

(E) Answer not known

178. The level of urea added to improve the nutritive value of straw (of 90 % Dm) is

(A) 1%

(B) 2%

(C) 3%

(D) 4%

(E) Answer not known

179. The complete feed block used for feeding of ruminants consist of
- (A) Roughages and concentrates only
 - (B) Concentrates only
 - (C) Molasses and minerals only
 - (D) None of the above
 - (E) Answer not known
180. During feed processing, Gelatinization of starch occurs in
- (A) Roasting
 - (B) Popping
 - (C) Flaking
 - (D) Pelleting
 - (E) Answer not known
181. Recommended moisture content (%) of grains for storage is
- (A) 10
 - (B) 15
 - (C) 20
 - (D) 25
 - (E) Answer not known
182. Supplementation of anionic salts to the cows during transition period helps in the prevention of
- (A) Milk fever
 - (B) Acidosis
 - (C) Ketosis
 - (D) Bloat
 - (E) Answer not known

186. The contribution of Desi Duck to the total egg production of India in 2022-23 was
- (A) 0.14 % (B) 0.74 %
(C) 0.54 % (D) 0.94 %
(E) Answer not known
187. The pre capita availability of eggs in India in 2022-23 was
- (A) 141 eggs per annum (B) 171 eggs per annum
(C) 101 eggs per annum (D) 191 eggs per annum
(E) Answer not known
188. As per the 20th Quinquennial livestock census, the cattle population in the state of Tamil Nadu is ————— million.
- (A) 9.519 (B) 9.897
(C) 9.951 (D) 9.195
(E) Answer not known
189. The contribution of livestock sector to Tamil Nadu's Gross value added (GSVA) in terms of percentage in the year 2021-22 was
- (A) 7.38 (B) 4.68
(C) 43.70 (D) 5.63
(E) Answer not known

190. The Tamil Nadu livestock development agency was established during the year _____ by the Govt. of Tamil Nadu.
- (A) 2000 (B) 2020
(C) 2002 (D) 2022
(E) Answer not known
191. Which among the following establishment was abbreviated as 'VIF'?
- (A) Veterinary International Forum
(B) Veterinary Incubation Foundation
(C) Veterinary International Foundation
(D) Veterinary Incubation Forum
(E) Answer not known
192. The contribution of Goat milk to the total milk production of the country during 2022-23 was
- (A) 3.30% (B) 4.10%
(C) 3.80% (D) 4.30%
(E) Answer not known
193. According to the prevention of cruelty to draught and pack animals Rules, 1965, maximum load permitted to Horse, Vehicle fitted with pneumatic tyres is
- (A) 500 kg (B) 650 kg
(C) 700 kg (D) 750 kg
(E) Answer not known

194. In livestock enterprise, the analysis that determines the level at which the gains or losses are equal
- (A) Benefit Cost Analysis (B) Break Even Analysis
(C) Financial Analysis (D) Whole Farm Analysis
(E) Answer not known
195. The decline in value of assets of a farm over a period of time is called as
- (A) Depreciation (B) Appreciation
(C) Defamation (D) Affirmation
(E) Answer not known
196. The interest on fixed capital or normal rate of return on the farmer's owned money capital is classified as
- (A) Explicit cost (B) Variable cost
(C) Implicit cost (D) Production cost
(E) Answer not known
197. In the economics of livestock enterprise, the value of return foregone from the next best alternative activity is defined as
- (A) Economic cost (B) Implicit cost
(C) Explicit cost (D) Opportunity cost
(E) Answer not known

198. The measure of capacity of the livestock project in terms of the rate at which it returns the capital is
- (A) NPW (B) BCR
(C) IRR (D) N/K ratio
(E) Answer not known
199. In the marketing functions, standardisation precedes
- (A) Storage (B) Grading
(C) Transportation (D) Packaging
(E) Answer not known
200. The 'AGMARK' standards for livestock products like milk and ghee are assigned by the following institution of Govt. of India
- (A) Bureau of Indian Standards
(B) ISO
(C) Directorate of Marketing and Inspection
(D) Agricultural Marketing Institute
(E) Answer not known