

**Subject: VCC (Animal Disease Diagnostic Laboratory)**

1. Cushing syndrome in dogs is observed due to
  - a. Hyperadrenocorticism
  - b. Hypoadrenocorticism
  - c. Hyperthyroidism
  - d. Hyperparathyroidism
2. Which one of the following increasing in pancreatitis in dog
  - a. Acid phosphatase
  - b. Arginase
  - c. Creatine kinase
  - d. Amylase
3. A/G ratio is decreased in which of the following condition
  - a. Chronic infections
  - b. Autoimmune disease
  - c. Chronic renal failure
  - d. Dehydration
4. BUN increases in the plasma of dogs during
  - a. Low protein intake
  - b. Polyuria
  - c. Congestive heart failure
  - d. Liver failure
5. Excessive formation of ketone bodies during starvation is due to
  - a. Decreased level of circulating glucagon
  - b. Increased level of free fatty acids in serum
  - c. Decreased formation of acetyl CoA in liver
  - d. Decreased activity of hormone sensitive lipase in adipose tissue.
6. Perinicious anemia is due to the deficiency of
  - a. Folic acid
  - b. Ferritin
  - c. Vitamin B12
  - d. Homocystiene
7. The genetic disorder Gaucher's disease is caused by the deficiency of
  - a. Gluco cerebrosidase
  - b. Phosphatidylethanolamine N-methyl transferase
  - c. Phosphatidic acid phosphatase
  - d. CTP : phosphor cholinecytidyl transferase

8. DNA fingerprinting technique was developed by
- Kornberg
  - Kerry Mullis
  - Alec Jeffreys
  - Albert Lasker
9. Grave's disease is due to
- Hypothyroidism
  - Hyperthyroidism
  - Hyperpituitrism
  - Immunosuppression
10. Alanine amino transferase is a sensitive indicator of liver damage in
- Pig
  - Cattle
  - Horse
  - Dogs
11. Which hormone plays a crucial role in regulating calcium levels in domestic animals by acting on the kidneys, bones, and intestines?
- Calcitonin
  - Thyroxine
  - Parathyroid hormone (PTH)
  - Insulin
12. Which clinical condition may result from chronic iron overload in domestic animals?
- Iron-deficiency anemia
  - Hepatic cirrhosis
  - Osteoporosis
  - Hypothyroidism
13. A high intake of which food source can lead to iodine deficiency in domestic animals?
- Brassicca spp.
  - Corn
  - Soybeans
  - Wheat
14. Which of the following is a specific indicator of early renal dysfunction
- Plasma proteins
  - SDMA
  - Acid Phosphatase
  - Alkaline Phosphatase

15. Phosphorous deficiency may lead to
- Tetany
  - Post-parturient Haemoglobinuria
  - Muscular dystrophy
  - Milk Fever
16. Which enzyme level is elevated in obstructive cholelithiasis in horse?
- ALT
  - AST
  - CPK
  - GGT
17. Menke's disease is due to an abnormality in the metabolism of
- Iron
  - Manganese
  - Magnesium
  - Copper
18. Selenium is a constituent of the which enzyme:
- Glutathione peroxidase
  - Homogentisate oxidase
  - Tyrosine hydroxylase
  - Phenylalanin hydroxylase
19. In cardiac diagnostics, which enzyme is specific to heart muscle damage and is often measured to assess the risk of a heart attack?
- Amylase
  - Lipase
  - Creatine kinase
  - Alanine transaminase (ALT)
20. In diabetes management, which parameter is essential for glucose monitoring and is often measured to assess long-term blood sugar control?
- Amylase
  - Hexokinase
  - Glucose Tolerance Test
  - Glycated hemoglobin (HbA1c)
21. Diarrhea may result in
- Metabolic acidosis
  - Metabolic alkalosis
  - Respiratory acidosis
  - Respiratory alkalosis

22. The most important renal buffer is
- Ammonia buffer
  - Proteinates
  - $\text{HCO}_3^- / \text{CO}_2$
  - $\text{H}_2\text{PO}_4^- / \text{HPO}_4^{2-}$
23. Which of the following is not a common digestive disorder in ruminants
- Bloat
  - GDV
  - Protein losing enteropathy
  - Acid Indigestion
24. Increased specific gravity is reported in
- Diabetes mellitus
  - Diabetes insipidus
  - Polydipsia
  - Polyuria
25. Which of the following increases during hemolytic disease
- Conjugated bilirubin
  - Unconjugated bilirubin
  - Total proteins
  - Glycated HB
26. Which of the following does not occur in metabolic acidosis
- Net acid production
  - Increased anion gap
  - Net bicarbonate loss
  - Decreased anion gap
27. Respiratory alkalosis can occur in
- Bronchial asthma
  - Collapse of lungs
  - Hysterical hyperventilation
  - Bronchial obstruction
28. Hypoproteinemia may be detected in
- Excess dietary protein intake
  - Dehydration
  - Phlegmonous stomatitis
  - Glomerulonephritis
29. Which of the following may increase in acute hepatitis in dog
- ALT
  - Cholesterol
  - A/G ratio
  - Creatinine

30. Which of the following is not an indicator of GFR
- Creatinine clearance test
  - Serum creatinine
  - Glycosuria
  - Urea
31. The most common fungus identified in guttural pouch mycosis of horse is-
- Candida* sp.
  - Aspergillus* sp.
  - Cryptococcus* sp.
  - Penicillium* sp.
32. COFAL test is used for the diagnosis of-
- Avian pox
  - New Castle disease
  - Avian leucosis
  - Avian Influenza
33. TLR5 is known to specifically sense and recognize\_\_\_\_\_ -
- Flagellin
  - LPS
  - ds viral RNA
  - Teichoic acid
34. Nagler reaction is exhibited by bacteria-
- Clostridium botulinum*
  - Staphylococcus aureus*
  - Bacillus anthracis*
  - Clostridium perfringens*
35. \_\_\_\_\_ is the lentogenic strain of NDV used for vaccine production.
- LaSota
  - Hitchner B1
  - CDF 66
  - APMV 1
36. Plasmid vectors can hold DNA inserts upto-
- 0.1-15kb
  - 35-50 kb
  - 50-100 kb
  - 75-300 kb
37. Coagulase production is an important indicator of pathogenicity in which of the following
- Staphylococcus* sp.
  - Mycobacterium* sp.
  - Rickettsia* sp.
  - Mycoplasma* sp.



38. Which of the statement is true for ISCOMs ?
- Activates only humoral immune response
  - Activates only cell mediated immune response
  - An adjuvant with very limited functions
  - An adjuvant with multiple functions
39. Curli amyloid fibers are produced by-
- Staphylococcus aureus*
  - E.coli*
  - Pseudomonas aeruginosa*
  - Mycobacterium tuberculosis*
40. Leptospira grows well in-
- Potassium Tellurite medium
  - EMJH medium
  - Edwards medium
  - Potato Dextrose Agar
41. OIE reference laboratory for rabies in India is located at -
- NIHSAD, Bhopal
  - Veterinary College, KVAFSU Bengaluru
  - NIV, Pune
  - IVRI, Bareilly
42. “Knock out animals” are the example of:
- Forward genetics
  - Reverse genetics
  - Alternate genetics
  - Criss-cross genetics
43. Non susceptibility to all agents in all antimicrobial categories is termed as-
- XDR (Extensively Drug Resistance)
  - PDR (Pan Drug Resistance)
  - MDR (Multiple Drug Resistance)
  - DTR (Difficult to Treat Resistance)
44. Small nucleotide fragment which binds to complementary sites of DNA fragment for synthesis of DNA strand is-
- Vector
  - Plasmid
  - Primer
  - Probe

45. Who proposed the three-domain system of classification?
- Haeckel
  - Whittaker
  - John Ray
  - Carl Woese
46. Which of the following chemical is not used as plasmid curing agent-
- Acridine orange
  - Ethidium Bromide
  - Acriflavine
  - SYBR Green
47. Example of primary binding test is -
- Agglutination
  - RIA
  - Precipitation
  - Complement fixation test
48. SDS-PAGE electrophoresis is used for-
- Separation of proteins
  - Separation of DNA
  - Separation of RNA
  - Separation of mRNA
49. A single strand of nucleic acid tagged with a radioactive molecule is called-
- Plasmid
  - Vector
  - Probe
  - Primer
50. Prevention of an immune response against a particular antigen-
- Autoimmunity
  - Hypersensitivity
  - Graft rejection
  - Tolerance
51. \_\_\_\_\_ has emerged as a promising urine-based tuberculosis biomarker
- Mycolic acid
  - Lipoarabinomannan
  - Surfactant protein
  - Sulfatides

52. Marek's disease virus establishes latency in
- Sensory ganglion
  - Monocytes
  - T Cells
  - Feather follicle
53. \_\_\_\_\_ are incomplete antigens that cannot mount immune reaction until combined with some bigger molecules
- Carrier molecule
  - Haptens
  - Subunit molecule
  - Adjuvants
54. \_\_\_\_\_ are currently the most advanced delivery system for mRNA vaccines
- Plasmid
  - Liposome nanoparticles
  - Lipoarabinomannan
  - Proteosomes
55. Which of the following is NOT an arthropod borne viral disease?
- Classical swine fever virus
  - African swine fever virus
  - Japanese encephalitis virus
  - Dengue haemorrhagic fever virus
56. The complement fragment that has the ability to stimulate the mast cells degranulation and release vaso active amines is called-
- Allergen
  - Reaginic antibody
  - Anaphylatoxin
  - Opsonin
57. Which serotype of FMD virus is most prevalent in India
- A
  - O
  - C
  - Asia 1
58. Negri bodies are produced by
- Canine distemper virus
  - Rabies virus
  - Infectious canine hepatitis virus
  - Canine parvovirus



59. Kupffer cells , histiocytes, mesangial cells are examples of-
- Macrophages
  - B cells
  - Neutrophils
  - T cells
60. The body part affected in infection with *Moraxella bovis* is-
- Tongue
  - Jaw
  - Eye
  - Nose
61. The worm which is present in the suc-cutaneous tissues of dog and flea acts as intermediate host, can be considered as
- Dioctophyma*
  - Dirofilaria*
  - Spirocerca*
  - Dipetalonema*
62. Worms, collected from the GI tract of duck during post mortem are showing non-recurrent and anastomosed cordons which indicate
- Cheilospirura*
  - Echinuria*
  - Dispharynx*
  - Tetrameres*
63. A worm of cattle which is slender, white in colour and medium sized with anterior end is ornamented by the different rows of cuticular rounded thickenings followed by interrupted cuticular ridges, could be diagnosed as
- Dictyocaulus*
  - Stephanofilaria*
  - Setaria*
  - Parafilaria*
64. On examination of faeces of a poultry, numerous barrel shaped and colourless eggs with two polar plugs are detected which indicate the infection of
- Capillaria*
  - Cheilospirira*
  - Tetrameres*
  - Trichuris*
65. The depth of each chamber of Mc Master slide is
- 15 cm
  - 1.5 cm
  - 0.15 cm
  - 1.5 c.c.

66. Trypanosomiasis is transmitted by
- Breeze flies
  - Tse-tse flies
  - Blow flies
  - Black flies
67. The percentage of formalin used in Knott's method for detecting microfilariae is
- 1%
  - 2%
  - 5%
  - 10%
68. A large blood sucking fly showing one pair of 3 segmented antennae of which segment 1 and 2 are long and segment 3 with 4 annulations could be identified as
- Haematopota*
  - Tabanus*
  - Chrysops*
  - Pangonia*
69. The faeces of cattle infected with fasciolosis has shown EPG of 320 which indicates the degree of infection as
- No infection
  - Mild
  - Moderate
  - Severe
70. On faecal culture, 3<sup>rd</sup> stage larvae of a strongyle worm are showing broad rounded head, 32 gut cells with long and filamentous tail of sheath which indicate
- Trichostrongylus*
  - Haemonchus*
  - Cooperia*
  - Oesophagostomum*
71. One poultry louse showing characteristics like long, slender, rounded head and hind legs are longer than others under microscope which could be identified as
- Lipeurus*
  - Menopon*
  - Goniocotes*
  - Cuclotogaster*
72. A dog louse of which each leg bear two claws is
- Damalinia*
  - Linognathus*
  - Trochodectes*
  - Heterodoxus*

73. A longirostrate ornate tick with no anal plate in male and second palpal segment 2-3 times longer than third segment could be diagnosed as
- Ixodes*
  - Hyalomma*
  - Amblyomma*
  - Nosomma*
74. Zinc sulphate floatation technique is generally used for detecting the eggs of
- Fasciola*
  - Taenia*
  - Strongyloides*
  - Ancylostoma*
75. If the size (lxb) of Oocysts comes within the range of 21-42  $\mu\text{m}$  X 16-30  $\mu\text{m}$  as per Levine (1985), then the concerned parasite will be
- Eimeria tenella*
  - Eimeria acervulina*
  - Eimeria maxima*
  - Eimeria brunetti*
76. Female mites with no sucker on leg could be seen in
- Sarcoptes*
  - Cnemidocoptes*
  - Notoedres*
  - Otodectes*
77. The Pronotal comb is present in
- Ceratophyllus*
  - Xenopsylla*
  - Pulex*
  - Tunga*
78. A tick is having lateral suture between dorsal and ventral surface and can be identified as
- Argas*
  - Otobius*
  - Ornithodoros*
  - Dermanyssus*
79. A dog is showing bilateral corneal opacity which is due to the infection caused by
- Leishmania donovani*
  - Babesia canis*
  - Hepatozoon canis*
  - Trypanosoma evansi*

80. Oocysts of *Cryptosporidium* can be diagnosed by
- Montenegro test
  - Bentonite flocculation test
  - Z-N acid fast staining
  - Dye test
81. Lugol's iodine solution is used for the diagnosis of
- eggs of hook worm
  - eggs of Schistosomes
  - oocysts
  - cysts
82. On faecal examination of a cat, sporocysts are being seen which could be diagnosed as infection caused by
- Toxoplasma*
  - Sarcocystis*
  - Isospora*
  - Cryptosporidium*
83. On microscopical examination of a blood smear of cattle showing leaf shaped parasites with kinetoplast at middle between nucleus and posterior end which is long and pointed can be considered as
- Trypanosoma brucei*
  - Trypanosoma melophagium*
  - Trypanosoma theileri*
  - Trypanosoma cruzi*
84. An infected dog showing the symptoms of diarrhoea, dysentery and steatorrhoea which may be due to
- Amoebosis
  - Giardiosis
  - Neosporosis
  - Isosporosis
85. Pyriform shaped and 4  $\mu\text{m}$  sized two organisms are being seen in a RBC by forming an acute angle with their narrow ends which could be
- Babesia bovis*
  - Babesia ovis*
  - Babesia equi*
  - Babesia canis*
86. Trichomonad with no posterior flagellum is
- Tritrichomonas suis*
  - Trichomonas gallinae*
  - Tetratrichomonas gallinarum*
  - Trichomitus rotunda*

87. The mite without spiracle is –
- Sarcoptes*
  - Demodex*
  - Dermanyssus*
  - Trombicula*
88. A reddish-brown coloured larva with pointed anterior end and truncated posterior end and two rows of spines in each segment is of
- Chrysomya*
  - Oestrus*
  - Hypoderma*
  - Gasterophilus*
89. Arista with hairs at the base and bare in distal portion is found in
- Flesh fly
  - Face fly
  - Sand fly
  - Stable fly
90. Hatchet cell is found in
- Tabanus*
  - Glossina*
  - Sarcophaga*
  - Calliphora*
91. In a disease, fever, laboured breathing and increased pulse rate are:
- Signs
  - Lesions
  - Causes
  - Sequelae
92. If a bronchus is lined by stratified squamous epithelium, it is said to have undergone
- Aplasia
  - Dysplasia
  - Hyperplasia
  - Metaplasia
93. Zenker's degeneration is an example for
- Epithelial hyaline
  - Amyloidosis
  - Muscle hyaline
  - Dystrophic calcification



94. Which among the following statements about wound healing is incorrect?
- It is a fundamental process in all living animals
  - It is controlled by opposing effects of growth stimulators and inhibitors
  - It involves proliferation of both epithelium and connective tissue
  - Healing occurs uniformly regardless of the organ involved
95. Hashimoto's disease is
- Colloidgoitre
  - Pancreatic Disorder
  - Autoimmune thyroiditis
  - Salivary gland disorders
96. Hypersplenism indicates
- Increased phagocytic activity of the spleen
  - Generalised infection
  - Increase accumulation of blood in the spleen
  - Neoplastic disorder
97. Tuberculosis in cattle is characterized by
- Haemorrhagic lymphadenitis
  - Serous lymphadenitis
  - Granulomatous lymphadenitis
  - Gangrenous lymphadenitis
98. The degenerative change in the neuron in which Nissl granules disappears is
- Vacuolation
  - Shrinkage
  - Chromatolysis
  - Satellitosis
99. "Clay-pipe" appearance of the bile duct is a feature of
- Cardiac cirrhosis
  - Parasitic cirrhosis
  - Pericellular cirrhosis
  - Nodular cirrhosis
100. Which of the following is not true with majority of the malignant neoplasms?
- Cessation of stimulus is followed by prompt regression
  - Proliferating cells are atypical and anaplastic
  - Proliferating cells are disorganized and autonomous in growth.
  - No immediate exciting cause can be identified

101. The most appropriate staining method for the demonstration of etiological agent in the tissue sections of animals suspected to have died of Aspergillosis is
- Hematoxylin & Eosin
  - Giemsa
  - Periodic acid -Schiff
  - Lendrum
102. Major Basic Protein is an important cytoplasmic component of
- Lymphocytes
  - Neutrophils
  - Eosinophils
  - Monocytes
103. In the oxygen dependent pathway of phagocytosis, the most important bactericidal agent formed is
- Oxygen free radical
  - Hydrogen peroxide
  - Hydroxyl radical
  - Hypochlorous acid
104. A cytokine that is liberated during acute inflammation is
- TGF $\beta$
  - TNF $\alpha$
  - TGF $\alpha$
  - IL5
105. Eosinophilic meningo encephalitis in pigs is due to
- Selenium deficiency
  - Salt toxicity
  - Iron toxicity
  - Copper deficiency
106. Folic acid deficiency can lead to
- Microcytic anaemia
  - Aplastic anaemia
  - Megaloblastic anaemia
  - Normocytic anaemia
107. Heinz bodies are
- Toxic granules seen in neutrophils
  - Nuclear remnants seen in RBC's
  - Denatured haemoglobin seen in RBC's
  - RBC's with abnormal notching

108. Fibrinous polyserositis is a feature of
- Salmonellosis
  - Classical swine fever
  - Aflatoxicosis
  - Glasser's disease
109. TNM classification of neoplasms, 'M' stands for
- The extent of primary tumor
  - Involvement of lymph nodes
  - Distant metastasis
  - Mitotic index
110. A test employed for the detection of protein in CSF is
- Gmelin's test
  - Benedict's test
  - Pandy's test
  - Robert's test
111. The ideal fixative used for identification uric acid in tissues is
- 10% neutral buffered formalin
  - Bouin's fluid
  - Zenker's fluid
  - Absolute alcohol
112. In horses used for antiserum production, a common lesion that is observed is
- Hyaline degeneration of lungs
  - Amyloidosis of spleen
  - Fatty change in liver
  - Perivascular cuffing in brain
113. Dwarfing and curling of embryos is characteristic to
- Ranikhet disease
  - Infectious laryngotracheitis
  - Infectious bronchitis
  - Marek's disease
114. Empyema of the guttural pouch is a feature of
- Glanders
  - Strangles
  - Dourine
  - African Horse sickness

115. The earliest cells to arrive at the site of acute inflammation in chicken are:
- Lymphocytes and monocytes
  - Heterophils and monocytes
  - Eosinophils and lymphocytes
  - Heterophils and eosinophils
116. The diluting fluid used for the enumeration of erythrocyte count is
- Thomas fluid
  - Hayem's fluid
  - Pilots solution
  - Tris buffer
117. Cerebellar hypoplasia in calves is a sequelae to infection by
- Bovine viral diarrhea
  - Bovine leucosis
  - Rinderpest
  - Foot and Mouth Disease
118. Coombs test is used in the diagnosis of
- Dourine
  - Strangles
  - Glanders
  - Equine infectious anaemia
119. *Eimeria stiedae* causes intra hepatic coccidiosis in
- Rats
  - Guinea pigs
  - Rabbits
  - Syrian Golden hamsters
120. Consumption of bracken fern by cattle may cause neoplasm of
- Liver
  - Urinary bladder
  - Gall bladder
  - Lungs

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|     |   |
|-----|---|
| 1.  | A |
| 2.  | D |
| 3.  | C |
| 4.  | C |
| 5.  | B |
| 6.  | C |
| 7.  | A |
| 8.  | C |
| 9.  | B |
| 10. | D |
| 11. | C |
| 12. | B |
| 13. | A |
| 14. | B |
| 15. | B |
| 16. | D |
| 17. | D |
| 18. | A |
| 19. | C |
| 20. | D |
| 21. | A |
| 22. | D |
| 23. | B |
| 24. | A |
| 25. | B |
| 26. | D |
| 27. | C |
| 28. | D |
| 29. | A |
| 30. | C |

|     |   |
|-----|---|
| 31. | B |
| 32. | C |
| 33. | A |
| 34. | D |
| 35. | A |
| 36. | A |
| 37. | A |
| 38. | D |
| 39. | B |
| 40. | B |
| 41. | B |
| 42. | B |
| 43. | B |
| 44. | C |
| 45. | D |
| 46. | D |
| 47. | B |
| 48. | A |
| 49. | C |
| 50. | D |
| 51. | B |
| 52. | C |
| 53. | B |
| 54. | B |
| 55. | A |
| 56. | C |
| 57. | B |
| 58. | B |
| 59. | A |
| 60. | C |

|     |   |
|-----|---|
| 61. | D |
| 62. | B |
| 63. | D |
| 64. | A |
| 65. | C |
| 66. | B |
| 67. | B |
| 68. | C |
| 69. | D |
| 70. | D |
| 71. | A |
| 72. | D |
| 73. | C |
| 74. | A |
| 75. | C |
| 76. | B |
| 77. | A |
| 78. | A |
| 79. | D |
| 80. | C |
| 81. | D |
| 82. | B |
| 83. | C |
| 84. | B |
| 85. | D |
| 86. | B |
| 87. | A |
| 88. | D |
| 89. | A |
| 90. | B |

|      |   |
|------|---|
| 91.  | A |
| 92.  | D |
| 93.  | C |
| 94.  | D |
| 95.  | C |
| 96.  | A |
| 97.  | C |
| 98.  | C |
| 99.  | B |
| 100. | A |
| 101. | C |
| 102. | C |
| 103. | D |
| 104. | B |
| 105. | B |
| 106. | C |
| 107. | C |
| 108. | D |
| 109. | C |
| 110. | C |
| 111. | D |
| 112. | B |
| 113. | C |
| 114. | B |
| 115. | B |
| 116. | B |
| 117. | A |
| 118. | D |
| 119. | C |
| 120. | B |