BIO – ZOOLOGY ONE MARKS (CHAPTER 7,8 AND 9)

1. The disease *Shigellosis* (Bacillary dysentery) in human is caused by
   a. *Shigella sp.* b. *Yersinia pestis* c. *Vibrio cholerae* d. *Clostridium tetani*
2. The disease Bubonic plague (Black death) in human is caused by
   a. *Shigella sp.* b. *Yersinia pestis* c. *Vibrio cholerae* d. *Clostridium tetani*
3. The disease Diphtheria in human is caused by
   a. *Corynebacterium diphtheriae* b. *Yersinia pestis*
   c. *Salmonella typhi* d. *Clostridium tetani*
4. The disease Cholera in human is caused by
   a. *Corynebacterium diphtheriae* b. *Yersinia pestis*
   c. *Salmonella typhi* d. *Vibrio cholerae*
5. The disease Tetanus (Lock jaw) in human is caused by
   a. *Corynebacterium diphtheriae* b. *Clostridium tetani*
   c. *Salmonella typhi* d. *Vibrio cholerae*
6. The disease Typhoid (Enteric fever) in human is caused by
   a. *Corynebacterium diphtheriae* b. *Clostridium tetani*
   c. *Salmonella typhi* d. *Vibrio cholerae*
7. The disease Pneumonia in human is caused by
   a. *Streptococcus pneumoniae* b. *Mycobacterium tuberculosis*
   c. *Yersinia pestis* d. *Vibrio cholerae*
8. The disease Tuberculosis in human is caused by
   a. *Streptococcus pneumoniae* b. *Mycobacterium tuberculosis*
   c. *Yersinia pestis* d. *Vibrio cholerae*
9. The disease Common cold in human is caused by
   a. *Rhino viruses* b. *Hepatitis – B virus* c. *Rubella virus* d. *Mumps virus*
10. The disease Mumps in human is caused by
    a. *Rhino viruses* b. *Mumps virus* c. *Rubella virus* d. *Hepatitis – B virus*
11. The disease Measles in human is caused by
    a. *Hepatitis – B virus* b. *Rubella virus* c. *Mumps virus* d. *Rhino viruses*
12. The disease Viral hepatitis in human is caused by
    a. *Rhino viruses* b. *Mumps virus* c. *Rubella virus* d. *Hepatitis – B virus*
13. The disease Chicken pox in human is caused by
    a. H1N1 virus b. Zoster virus c. *Flavi virus* d. *Alpha virus*
14. The disease Poliomyelitis in human is caused by
    a. *Polio virus* b. Zoster virus c. *Flavi virus* d. *Alpha virus*
15. The disease Dengue fever in human is caused by
    a. *Polio virus* b. Zoster virus c. *Flavi virus* d. *Alpha virus*
16. The disease Chikungunya in human is caused by
    a. *Polio virus* b. Zoster virus c. *Flavi virus* d. *Alpha virus*
17. The disease Swine flu in human is caused by
    a. *Polio virus* b. H1N1 virus c. *Flavi virus* d. *Alpha virus*
18. The disease Amoebiasis in human is caused by
    a. *Trypanosoma species* b. *Leishmania donovani*
    c. *Entamoeba histolytica* d. *Plasmodium falciparum*
19. The disease African sleeping sickness in human is caused by
    a. *Trypanosoma species* b. *Leishmania donovani*
    c. *Entamoeba histolytica* d. *Plasmodium falciparum*
20. The disease Kala – azar in human is caused by
    a. *Trypanosoma species* b. *Leishmania donovani*
    c. *Entamoeba histolytica* d. *Plasmodium falciparum*
21. The disease malaria in human is caused by

a. *Trypanosoma species* b. *Leishmania donovani*
c. *Entamoeba histolytica* d. *Plasmodium falciparum*

22. The disease Athlete's foot in human is caused by
a. *Trypanosoma species* b. *Tinea pedis*
c. *Ascaris lumbricoides* d. *Wuchereria bancrofti*

23. The disease Ascariasis in human is caused by
a. *Trypanosoma species* b. *Tinea pedis*
c. *Ascaris lumbricoides* d. *Wuchereria bancrofti*

24. The disease Filariasis in human is caused by
a. *Trypanosoma species* b. *Tinea pedis*
c. *Ascaris lumbricoides* d. *Wuchereria bancrofti*

25. The disease Dengue fever in human is transmitted by
a. *Aedes aegypti* b. *Anopheles* mosquito c. *Culex* mosquitoe d. *Musca domestica*

26. The disease Amoebiasis in human is transmitted by
a. *Aedes aegypti* b. *Anopheles* mosquito c. *Culex* mosquitoe d. *Musca domestica*

27. The disease Chikungunya in human is transmitted by
a. *Aedes aegypti* b. *Anopheles* mosquito c. *Culex* mosquitoe d. *Musca domestica*

28. The disease malaria in human is transmitted by
a. *Aedes aegypti* b. *Anopheles* mosquito c. *Culex* mosquitoe d. *Musca domestica*

29. The disease African sleeping sickness in human is transmitted by
a. House flies b. Tsetse flies c. sand fly d. *Anopheles* mosquito

30. The disease Kala – azar in human is transmitted by
a. House flies b. Tsetse flies c. sand fly d. *Anopheles* mosquito

31. The disease Filariasis in human is transmitted by
a. *Aedes aegypti* b. *Anopheles* mosquito c. *Culex* mosquitoe d. *Musca domestica*

32. The overall ability of body to fight against the disease causing pathogen is called
a. immunity b. susceptibility c. specificity d. vicinity

33. Antibody production is the characteristic feature of _____ only.
a. amphibians b. invertebrates c. vertebrates d. mammals

34. The process of production of blood cells in the bone marrow is called
a. monocytopoiesis b. lymphopoiesis c. granulopoiesis d. haematopoiesis

35. Bursa of Fabricius is a primary lymphoid organ of
a. reptiles b. birds c. mammals d. amphibians

36. Which is not a primary lymphoid organ
a. thymus b. bursa of fabricus c. lymph node d. bone marrow

37. One of the main secretions of thymus is the hormone
a. insulin b. interferon c. thymosin d. growth hormone

38. Which is not a secondary lymphoid organ
a. appendix b. tonsils c. adenoids d. thymus

39. The glands located in the roof of the mouth, behind the soft palate where the nose connects to the throat.
a. appendix b. tonsils c. adenoids d. thymus

40. _____ is a secondary lymphoid organ located in the upper part of the abdominal cavity close to the diaphragm.
a. appendix b. tonsils c. adenoids d. spleen

41. The outer most layer of the lymph node is called cortex, which consists of
a. B-lymphocytes b. T-lymphocytes c. follicular cells d. kuffer cells

42. The paracortex zone is beneath the cortex of lymph node, which is richly populated by
a. B-lymphocytes b. T-lymphocytes c. follicular cells d. kuffer cells

43. The only cells capable of specifically recognising and producing an immune response are the
a. lymphocytes b. macrophages c. monocytes d. dendritic cells

44. _____ is a substance capable of initiating an immune response.
a. adjuvants b. immunogen c. Haptens d. antibodies
45. _____ are substance that are non-immunogenic but can react with the products of a specific immune response.
a. adjuvants b. immunogen c. Haptens d. antibodies
46. Substances that can enhance the immune response to an antigen are called _____.
a. adjuvants b. immunogen c. Haptens d. antibodies
47. _____ is an antigenic determinant and is the active part of an antigen.
a. Haptens b. paratope c. Epitope d. adjuvants
48. _____ is the antigen – binding site and is a part of an antibody which recognizes and binds to an antigen.
a. Haptens b paratope c. Epitope d. adjuvants
49. _____ is the property of a substance (antigen) that allows it to react with the products of the specific immune response.
a. Antigenicity b. susceptibility c. specificity d. vicinity
50. Light chains (L) of an antibody molecule have molecular weight
a. 15,000 Da b. 25,000 Da c. 35,000 Da d. 45,000 Da
51. Heavy chains (H) of an antibody molecule have molecular weight
a. 50,000 Da b. 40,000 Da c. 60,000 Da d. 70,000 Da
52. An antibody molecule is Y shaped structure that comprises of
a. two polypeptide chains b. six polypeptide chains
c. four polypeptide chains d. three polypeptide chains
53. The process by which a pathogen is marked of ingestion and destruction by a phagocyte is
a. agglutination b. precipitation c. opsonisation d. neutralization
54. Measles, Mumps and Rubella (MMR) vaccine and the Varicella (chickenpox) vaccine are
a. live attenuated vaccine b. killed vaccine c. toxoids d. recombinant vaccine
55. DPT vaccine is the type of
a. live attenuated vaccine b. killed vaccine c. toxoids d. recombinant vaccine
56. Hepatitis-B vaccine is the type of
a. first generation vaccine b. second generation vaccine
c. third generation vaccine d. DNA vaccine
57. Who discovered vaccine against rabies, anthrax and cholera.
a. Louis Pasteur b. Dr. Edward Jenner
c. Calmette and Guerin d. Dr. Albert Sabin
58. Who prepared first vaccine for small pox in 1796.
a. Louis Pasteur b. Dr. Edward Jenner
c. Calmette and Guerin d. Dr. Albert Sabin
59. Polio vaccine was developed by _____ (live attenuated oral polio vaccine).
a. Louis Pasteur b. Dr. Edward Jenner
c. Calmette and Guerin d. Dr. Albert Sabin
60. BCG vaccine was developed by _____ against tuberculosis in France in the year 1908.
a. Louis Pasteur b. Dr. Edward Jenner
c. Calmette and Guerin d. Dr. Albert Sabin
61. Allergy is a form of over active immune response mediated by
a. IgE b. mast cells c. IgA d. both a and b
62. _____ results from the failure of one or more components of the immune system.
a. Immunodeficiency b. allergy c. hypersensitivity d. auto immune deficiency
63. HIV is seen as a spherical virus and _____ in diameter.
a. 50-60nm b. 80-100nm c. 100-120nm d. 160-180nm
64. At the core of HIV contain two large

a. single stranded RNA b. double stranded DNA
c. single stranded DNA d. double stranded RNA

65. RNA genome of the virus replicates to form viral DNA with the help of the enzyme
a. helicase b. reverse transcriptase c. topoisomerase d. DNA polymerase
66. The preliminary test of AIDS is
a. PCR b. western blot c. widal test d. ELISA
67. More reliable and a confirmatory test of AIDS is
a. PCR b. western blot c. widal test d. ELISA
68. The LAB bacteria grows in milk and convert it into curd, thereby digesting the milk protein
a. casein b. pepsin c. renin d. trypsin
69. _____ are compounds in food (fibers) that induce the growth or activity of beneficial microorganisms.
a. Antibiotics b. Symbiotics c. Probiotics d. Prebiotics
70. _____ are live microorganisms intended to provide health benefits when consumed, generally by improving or restoring the gut flora.
a. Prebiotics b. Probiotics c. Symbiotics d. Antibiotics
71. The flavour in yogurt is due to
a. casein b. rennet c. renin d. acetaldehyde
72. During cheese production, milk is usually acidified and the enzyme _____ is added to cause coagulation.
a. casein b. rennet c. renin d. acetaldehyde
73. Which is called Baker's Yeast
a. *Propionibacterium shermanii* b. *Saccharomyces cerevisiae*
c. *Lactobacillus lactis* d. *Streptococcus thermophilus*
74. Antibiotic means
a. good life b. supports lifec. against life d. no life
75. _____ discovered Streptomycin and was the first to use the term "antibiotic" in 1943.
a. Selman Waksman b. Alexander Fleming c. Earnest Chain d. Howard Florey
76. _____ is also referred as the "queen of drugs"
a. Penicillin b. Tetracyclinec. Streptomycin d. erythromycin
77. Which was the first antibiotic discovered by Alexander Fleming in 1926.
a. Penicillin b. Tetracyclinec. Streptomycin d. erythromycin
78. _____ is the property of antibiotics to kill microorganisms.
a. Antibiosis b. antigenicity c. immunity d. susceptibility
79. _____ is bactericidal against both gram positive and gram negative bacteria, especially against *Mycobacterium tuberculosis*.
a. Penicillin b. Tetracyclinec. Streptomycin d. erythromycin
80. _____ is an applied science which deals with the biochemical process of fermentation and its practical uses.
a. Zymology b. Ciderology c. Brewology d. Oenology
81. _____ is the science and study of wine and wine making.
a. Zymology b. Ciderology c. Brewology d. Oenology
82. In some parts of South India, a traditional drink called _____is obtained from fermenting sap of palms and coconut trees.
a. pathaneer b. toddy c. paneer d. soda
83. World biofuel day is observed every year on
a. 10th August b. 10th October c. 10th March 10th November
84. Choose the correct option

Microbes	Organic acid
A. *Aspergillus niger*	- *i)* Butyric acid
B. Acetobacter aceti	- *ii)* Fumaric acid

C. *Rhizopus oryzae* - *iv)* Acetic acid
D. Clostridium butyricum - *iv)* Citric acid
a. A-i B-ii, C-iii, D-iv b. A-iv B-iii, C-ii, D-i c. A-iv B-ii, C-iii, D-i d. A-iv B-i, C-ii, D-iii

85. _____ are used in detergent formulations and are used for removing oily stains from the laundry.
a. Lipases b. amylase c. pectinase d. streptokinase

86. _____ are used as "clot buster" for removing clots from the blood vessels of patients who have undergone myocardial infarction.
a. Lipases b. amylase c. statins d. streptokinase

87. _____ produced by the yeast *Monascus purpureus* have been used to lower blood cholesterol levels.
a. Lipases b. amylase c. statins d. streptokinase

88. _____ an immunosuppressant used in organ transplantation is produced from the fungus *Trichoderma polysporum*.
a. Cyclosporin A b. amylase c. statins d. streptokinase

89. It is multi- plasmid hydrocarbon-degrading bacterium which can digest the hydrocarbons in the oil spills
a. *Pseudomonas putida* b. *Nitrosomonas europaea*
c. *Ideonella sakaiensis* d. *Dechloromonas aromatica*

90. _____ is also capable of degrading benzene and a variety of halogenated organic compounds including trichloroethylene and vinyl chloride.
a. *Pseudomonas putida* b. *Nitrosomonas europaea*
c. *Ideonella sakaiensis* d. *Dechloromonas aromatica*

91. _____ is currently tried for recycling of PET plastics.
a. *Pseudomonas putida* b. *Nitrosomonas europaea*
c. *Ideonella sakaiensis* d. *Dechloromonas aromatica*

92. Insulin is formed of ___ amino acids which are arranged in two polypeptide chains, A and B.
a. 45 b. 25 c. 51 d. 61

93. Insulin polypeptide chain A has ____ amino acids.
a. 15 b. 21 c. 30 d.51

94. Insulin polypeptide chain B has ____ amino acids.
a. 15 b. 21 c. 30 d.51

95. _____ was the first ever pharmaceutical product of recombinant DNA technology administered to humans.
a. Insulin b. interferon c. vaccine d. glucagon

96. In 1997, Rosie, the first transgenic cow produced human protein enriched milk, which contained the _____.
a. human alpha lactalbumin c. human insulin
c. human glucagon d. human interferon

97. Therapy which involves insertion of DNA into the genome to replace the missing gene product is
a. Gene augmentation b. Gene inhibition
c. Gene mutation d. Gene deletion

98. Therapy which involves insertion of the anti sense gene which inhibits the expression of the dominant gene is
a. Gene augmentation b. Gene inhibition
c. Gene mutation d. Gene deletion

99. The recombinant vaccine for _____ was the first synthetic vaccine launched in 1997.
a. Diabetes mellitus b. common cold
c. malaria d. hepatitis B (HbsAg)

100. The first clinical gene therapy was given in 1990 by French Anderson to a four year old girl with _____ deficiency.
a. insulin b. growth hormone c. adenosine deaminase d. RBC
101. _____ can develop into more than 200 cells types of the adult body.
a. adult stem cells b. ES Cells c. brain cells d. liver cells
102. _____ is a rich source of adult stem cells.
a. spermatogonia cells b. yellow bone marrow
c. brain cells d. red bone marrow
103. The ability of a single cell to divide and produce all of the differentiated cells in an organism
a. Pluripotency b. Multipotency c. Totipotency d. Oligopotency
104. What is a very important diagnostic tool to determine if a person is HIV positive or negative.
a. ELISA b. PCR c. Widal test d. Urine test
105. The technique PCR was developed by _____ (Nobel laureate, 1993) in the year 1983.
a. Eva Engvall and Peter Perlmann b. Kary Mullis
c. Ian Wilmut and Campbell d. Best and Banting
106. _____ in 1921, isolated insulin from the pancreatic islets of a dog and demonstrated its effectiveness against diabetes.
a. Eva Engvall and Peter Perlmann b. Kary Mullis
c. Ian Wilmut and Campbell d. Best and Banting
107. ELISA is a biochemical procedure discovered by _____ to detect the presence of specific antibodies or antigens in a sample of serum, urine, etc.
a. Eva Engvall and Peter Perlmann b. Kary Mullis
c. Ian Wilmut and Campbell d. Best and Banting
108. The double stranded DNA of interest is denatured to separate into two individual strands by high temperature. This is called _____.
a. renaturation b. synthesis c. annealing d. denaturation
109. The primer template is used to synthesize DNA by using
a. Taq – DNA polymerase b. Synthetase
c. Helicase d. Isomerase
110. The technique can also be used for amplifications of RNA in which case it is referred to as
a. ELISA b. PCR c. RT-PCR d. Western blot
111. _____is the process of introduction of extra (foreign/exogenous) DNA into the genome of the animals to create and maintain stable heritable characters.
a. Cloning b. Transgenesis c. transcription d. Gene therapy
112. The foreign DNA that is introduced is called the transgene and the animals that are produced by DNA manipulations are called
a. transgenic animals b. the genetically engineered
c. genetically modified organisms d. all the above
113. Dolly was the first mammal (Sheep) clone developed by _____ in 1997.
a. Eva Engvall and Peter Perlmann b. Kary Mullis
c. Ian Wilmut and Campbell d. Best and Banting
114. _____ are proteinaceous, antiviral, species specific substances produced by mammalian cells when infected with viruses.
a. Alpha lactalbumin c. Insulin c. Glucagon d. Interferon
115. Vaccines that use components of a pathogenic organism rather than the whole organism are called
a. Subunit recombinant vaccines b) attenuated recombinant vaccines
c) DNA vaccines d) conventional vaccines
116. _____are used for testing the safety of vaccines.
a. Transgenic mice b. Transgenic fish
c. Transgenic cow d. Transgenic sheep