

## MCQS on Viruses

1. Viruses are ..... times smaller than most bacteria.

- A. 10 to 100
- B. 100 to 1000
- C. 1000 to 10000
- D. None of the above

2. Approximate size of viruses ranges from.....

- A. 20 to 300  $\mu\text{m}$
- B. 20 to 300 nm
- C. 20 to 300 mm
- D. 200 to 300  $\mu\text{m}$

3. .... are incapable of independent growth in artificial media.

- A. Algae
- B. Bacteria
- C. Viruses
- D. Fungi

4. .... can grow only in animal cells, plant cells or in microorganisms.

- A. Protozoa
- B. Viruses
- C. Algae
- D. Fungi

5. Viruses reproduce in living cells by the mechanism of.....

- A. Adsorption
- B. Insertion
- C. Replication
- D. Deletion

6. Viruses are also referred to as.....

- A. Obligate intracellular parasite

- B. Facultative intracellular parasite
- C. Obligate aerobic parasite
- D. Both A and B

7. .... depends on host cell to carry out all the vital functions.

- A. Protozoa
- B. Pteridophytes
- C. Viruses
- D. Molds

8. ....lack metabolic machinery of their own to generate energy or to synthesize proteins.

- A. Yeast
- B. Molds
- C. Viruses
- D. None of the above

9. The viral genetic material is.....

- A. DNA
- B. RNA
- C. Can be both A or B
- D. None of the above

10. Viruses can be seen.....

- A. By naked eyes
- B. By Simple microscope
- C. By electron microscope
- D. Both B and C

11. The structurally complete mature and infectious virus is called the.....

- A. Prion
- B. Virion
- C. Viroid
- D. None of the above

12. Which of the following is the viral disease?

- A. Candidiasis
- B. Cholera
- C. Flu
- D. Bacillary dysentery

13. Viruses are generally ..... to broad range of antibiotics such as penicillin, streptomycin, and others.

- A. Sensitive
- B. Delicate
- C. Insensitive
- D. Both A and B

14. .... are noncellular infectious entities whose genome are nucleic acid.

- A. Prions
- B. Viruses
- C. Platyhelminths
- D. Bacteria

15. Viruses reproduce.....

- A. In moist environment
- B. Only in living cell
- C. Anywhere in Environment
- D. In nutrient rich environment

16. Bacterial viruses are also called as .....

- A. Phage
- B. Bacteriophage
- C. Both A and B
- D. None of the above

17. Study of viruses is also called as.....

- A. Virionology
- B. Virology
- C. Phagology
- D. None of the above

18. A discipline which examines the structure, function and organization of macromolecule in which biological specificity is encoded is called as.....

- A. Biochemistry
- B. Molecular biology**
- C. Applied biology
- D. Analytical biology

19. Bacteriophages were discovered independently by ..... in England in 1915.

- A. Frederick W. Twort**
- B. Felix d'Herelle
- C. Louis Pasteur
- D. None of the above

20. Bacteriophages were discovered by..... at Pasteur institute in Paris in 1917.

- A. Frederick W. Twort
- B. Felix d'Herelle**
- C. Louis Pasteur
- D. None of the above

21. Bacteriophages were discovered by Fredrick W. Twort in.....

- A. 1955
- B. 1896
- C. 1915**
- D. 1889

22. Bacteriophages were discovered by Felix d'Herelle in .....

- A. 1915
- B. 1917**
- C. 1889
- D. 1886

23. Twort Observed that bacterial colonies sometimes underwent..... by viruses.

- A. Putrefaction
- B. Liquefaction

- C. Lysis
- D. Both A and B

24. The word bacteriophage was coined by.....

- A. Frederick W. Twort
- B. Felix d'Herelle
- C. Louis Pasteur
- D. None of the above

25. .... is the parasite for bacteria.

- A. Bacteriophage
- B. Protozoa
- C. Algae
- D. Fungi

26. .... are the smallest and simplest biological entities known which are capable of self-replication.

- A. Bacteria
- B. Protozoa
- C. Bacteriophage
- D. Yeast

27. .... interaction has become the model system for the study of viral pathogenicity.

- A. Algae- Bacteriophage
- B. Bacterium-Bacteriophage
- C. Protozoa- Bacteriophage
- D. Yeast- Bacteriophage

28. Bacteriophages are composed of nucleic acid core surrounded by.....

- A. Protein coat
- B. Fatty acid coat
- C. Lipid coat
- D. PUFA coat

29. There are types of bacterial viruses such as lytic and .....

- A. Virulent
- B. Temperate**
- C. Both A and B
- D. None of the above

30. Lytic phages are also known as..... phages.

- A. Avirulent
- B. Temperate
- C. Virulent**
- D. None of the above

31. Avirulent phages are also known as.....

- A. Lytic
- B. Temperate**
- C. Both A and B
- D. None of the above

32. Virulent phages burst the host cell by releasing many phage particles to infect other host cell, this is called as a.....

- A. Lysogenic cycle
- B. Lytic cycle**
- C. Temperate cycle
- D. None of the above

33. When viral nucleic acid is carried and replicated in the host bacterial cell from one generation to another without any cell lysis is called as.....

- A. Lysogenic cycle**
- B. Lytic cycle
- C. Virulent cycle
- D. None of the above

34. Lysogenic cycle is also known as.....

- A. Virulent cycle
- B. Temperate cycle**
- C. Lytic cycle
- D. None of the above

35. Temperate phages may spontaneously become ..... at some subsequent generation and lyse the host cell.

- A. Avirulent
- B. Lysogenic
- C. Virulent
- D. None of the above

36. All phages have a nucleic acid core covered by a protein coat or .....

- A. Envelope
- B. Capsid
- C. Polyhedra
- D. None of the above

37. The capsid is made up of morphological subunits called.....

- A. Protomers
- B. Capsidomic units
- C. Capsomers
- D. Capsididemic units

38. The capsomeres consist of a number of a protein subunits or molecules called.....

- A. Capsid
- B. Protomers
- C. Protein unit
- D. None of the above

39. Bacterial viruses may be grouped into ..... morphological types.

- A. Five
- B. Six
- C. Ten
- D. Four

40. ....viruses have lipid containing envelope and have no detectable capsid and possess double stranded DNA.

- A. Pleomorphic

- B. Photomorphic
- C. Photoreceptive
- D. Protomorphic

41. Pleomorphic viruses have no detectable.....

- A. Envelope
- B. Nucleic acid
- C. Capsid
- D. DNA

42. Pleomorphic viruses possesses .....

- A. Single stranded DNA
- B. Double stranded DNA
- C. Single stranded RNA
- D. Double stranded RNA

43. Example of Pleomorphic virus is.....

- A. Corona
- B. Influenza
- C. TMV
- D. MV-L2

44. Most of the phages have either ..... symmetry.

- A. Circular or spiral
- B. Cubic or helical
- C. Circular or helical
- D. Circular or cubic

45. Polyhedra is a..... phage and is rod shaped.

- A. Cubic
- B. Helical
- C. Circular
- D. Spiral

46. Polyhedral phages are..... in shape



- A. Icosahedral
- B. Binal
- C. Penton
- D. Pentagonal

47. The icosahedron is a regular polyhedron with ..... triangular faces and 12 vertices.

- A. 12
- B. 20
- C. 18
- D. 15

48. The icosahedron is a regular polyhedron with 20 triangular faces and .....vertices.

- A. 12
- B. 20
- C. 18
- D. 15

49. In icosahedron capsomer which is surrounded five other capsomeres is termed as

- A. Decan
- B. Penton
- C. Polygon
- D. Septon

50. Head of ..... phage is an Icosahedron elongated by one or two bands of hexons.

- A. T4
- B. T2
- C. T7
- D. Both A and B

51. Rod shaped viruses have their capsomers arranged ..... and not in stacked rings.

- A. Spirally
- B. Cubically
- C. Helically
- D. Spherically

52. An example of rod-shaped bacteriophage is

- A. HSV
- B. Herpes
- C. M13
- D. T2

53. Some bacteriophages have very complex structure including a head and tail, except.....

- A. T2
- B. T4
- C. T7
- D. T6

54. T even coliphages are said to have..... symmetry because each virion has both an icosahedral head and hollow helical tail.

- A. Binal
- B. Spherical
- C. Cubic
- D. None of the above

55. Phage M13 contain .....DNA as a genetic material.

- A. Double stranded circular
- B. Single stranded circular
- C. Double stranded helical
- D. Single stranded helical

56. Given phages contain double stranded circular DNA except.

- A. T1
- B. T2
- C. T7
- D. M13

57. Which of the following phage contain double stranded circular DNA?

- A. PhiX174
- B. Fd
- C. M13

D. Mu

58. The DNA of phage lambda is ..... in virion.

- A. Circular
- B. Linear
- C. Helical
- D. Spiral

59. The DNA of phage lambda is ..... in host.

- A. Circular
- B. Linear
- C. Helical
- D. Spiral

60. The DNA of lambda phage is circular in host because of .....

- A. Cohesive end joining
- B. Sticky end joining
- C. Helical joining
- D. Nucleic acid structure

61. Which of the following family of virus is enveloped.....

- A. Myoviridae
- B. Styloviridae
- C. Pedoviridae
- D. Plasmaviridae

62. Which of the following is enveloped viral family?

- A. Plasmaviridae
- B. Cystoviridae
- C. Both A and B
- D. None of the above

63. Which of the following virus family is non enveloped?

- A. Myoviridae

- B. Leviviridae
- C. Microviridae
- D. All of the above

64. Which of the virus family is non enveloped single stranded?

- A. Leviviridae
- B. Tectiviridae
- C. Corticoviridae
- D. Styloviridae

65. Which of the virus family is non enveloped double stranded?

- A. Inoviridae
- B. Styloviridae
- C. Leviviridae
- D. Microviridae

66. Which of the following is the enveloped family of the virus?

- A. Plasmaviridae
- B. Cystoviridae
- C. Both A and B
- D. None of the above

67. Which of the following is the Double stranded RNA enveloped virus family?

- A. Cystoviridae
- B. Plasmaviridae
- C. Corticoviridae
- D. None of the above

68. Which of the following is the Double stranded DNA envelope virus family?

- A. Cystoviridae
- B. Plasmaviridae
- C. Corticoviridae
- D. None of the above

69. Which of the following is non enveloped single stranded RNA virus family?

- A. Cystoviridae
- B. Plasmaviridae
- C. Corticoviridae
- D. Leviviridae

70. Which of the following is the non-enveloped single stranded DNA virus family?

- A. Inoviridae
- B. Microviridae
- C. Both A and B
- D. None of the above

71. Which of the following is the non-enveloped double stranded DNA virus family?

- A. Pedoviridae
- B. Myoviridae
- C. Tectiviridae
- D. All of the above

72. .... is the group of bacteriophages that infect non motile strain B of E. coli.

- A. Ecophages
- B. Coliphages
- C. Exophages
- D. None of the above

73. Coliphages are designated as.....

- A. T1 TO T7
- B. M12 to M17
- C. T12 TO T18
- D. None of the above

74. All the phages from T1 to T7 except T3 and T7 contains exclusive .....

- A. RNA
- B. DNA
- C. Lipid RNA
- D. Both A and C

75. The T phages ranges from about ..... in length.

- A. 65 to 200 nm
- B. 15 to 35 nm
- C. 88 to 100 nm
- D. 315 to 450 nm

76. The T phages ranges about ..... in width.

- A. 50 to 80 nm
- B. 65 to 200 nm
- C. 15 to 45 nm
- D. None of the above

77. Lambda phage comes under family.....

- A. Inoviridae
- B. Styloviridae
- C. Leviviridae
- D. Microviridae

78. T7 phage comes under family.....

- A. Myoviridae
- B. Styloviridae
- C. Pedoviridae
- D. Plasmaviridae

79. T2 phage belongs to virus family.....

- A. Myoviridae
- B. Styloviridae
- C. Pedoviridae
- D. Plasmaviridae

80. P2 phage belongs to virus family.....

- A. Myoviridae
- B. Styloviridae
- C. Pedoviridae
- D. Plasmaviridae

81. PM2 phage comes under family.....

- A. Cystoviridae
- B. Plasmaviridae
- C. Corticoviridae
- D. Leviviridae

82. PRD1 phage comes under family.....

- A. Leviviridae
- B. Tectiviridae
- C. Corticoviridae
- D. Styloviridae

83. Phage MV-L2 comes under family.....

- A. Cystoviridae
- B. Plasmaviridae
- C. Corticoviridae
- D. Leviviridae

84. F2 phages have ..... structure.

- A. Single stranded DNA
- B. Single stranded RNA
- C. Double stranded DNA
- D. Double stranded DNA

85. .... coliphages were discovered long after the tadpole shaped phages were known.

- A. Filamentous
- B. Icosahedral
- C. Cubic
- D. None of the above

86. Filamentous phage for E. coli include.....

- A. Fd
- B. F1
- C. Both A and B

D. None of the above

87. Filamentous phages of E. coli have .....

- A. Single stranded DNA
- B. Single stranded RNA
- C. Double stranded DNA
- D. Double stranded DNA

88. The first step in infection of a host bacterial cell by a phage is .....

- A. Penetration
- B. Adsorption
- C. Assembly
- D. Replication

89. Initial adsorption of phage to the receptor is .....

- A. Reversible
- B. Irreversible
- C. Irreversible at first and then reversible
- D. None of the above

90. The second step in viral lytic cycle is.....

- A. Absorption
- B. Penetration
- C. Replication
- D. Assembly

91. During penetration Phage enzyme ..... digest certain cell surface structure of host.

- A. Lysozyme
- B. Peroxidase
- C. Hydrolase
- D. All of the above

92. Phage such as..... do not have contractile sheath.

- A. T1



- B. T5
- C. T2
- D. Both A and B

93. Hershey and Chase proved that DNA is the genetic material. They worked on.....

- A. Bacteriophages
- B. Prions
- C. Fungi
- D. Protozoa

94. A virion is the ....

- A. Complex infectious virus particle
- B. Complex infectious protein
- C. Misfolded protein
- D. None of the above

95. The organism which engulf bacteria is known as.....

- A. Bacteria
- B. Bacteriophages
- C. Algae
- D. None of the above

96. Which of the following is the bacteriophage?

- A. M13
- B. Herpes
- C. Influenza
- D. Pox virus

97. T4 phage generally parasitizes.....

- A. E. coli
- B. Salmonella
- C. Shigella
- D. Pseudomonas

98. Bacteriophages undergo replication by.....

- A. Lytic cycle
- B. Lysogenic cycle
- C. Budding
- D. Both A and B

99. The viral genome that is integrated to the bacterial genome is.....

- A. Proteomes
- B. Prophage
- C. Capsomer
- D. Nucleic acid

100. Which of the following is the single stranded RNA phage?

- A. M13
- B. M12
- C. MV-L1
- D. None of the above

101. Third step of Phage lytic cycle is.....

- A. Penetration
- B. Adsorption
- C. Transcription
- D. Assembly and release

102. In transcription early phage genes are transcribed using the existing bacterial .....

- A. DNA ligase
- B. DNA polymerase
- C. RNA polymerase
- D. DNA gyrase

103. A lambda phage enzyme coded by the ..... gene directs the insertion of the phage DNA into bacterial chromosome.

- A. Cro 1
- B. int
- C. Cro 3
- D. Lyl 1

104. In lambda phage single site-specific recombination event and insertion of phage system into the host genome is catalyzed by the enzyme.....

- A. Cro 1
- B. **int**
- C. Cro 3
- D. Lyl 1

105. In lambda phage insertion of phage DNA into the host cell genome occurs between .....

- A. **gal and bio genes**
- B. Cro 1 and Cro 3 genes
- C. Int and sal1 genes
- D. None of the above

106. After injection of phage DNA no phage can be recovered by disrupting the infected bacterium. this is termed the .....

- A. Solar period
- B. **Eclipse period**
- C. Rise period
- D. Latent period

107. The time of infection until lysis is the.....

- A. Solar period
- B. Eclipse period
- C. Rise period
- D. **Latent period**

108. The bacterial strain by different phage types gives an indication of the identity of the bacterium. This laboratory procedure is termed as Bacteriophage.....

- A. **Typing**
- B. Straining
- C. Molding
- D. Settling

109. In agar plate culture bacteriophages lyse the bacterial cells and forms clear zone called as.....

- A. Cloud
- B. Prophage
- C. Plaque
- D. Lysogen

110. In ..... the viral DNA of the temperate phage is incorporated into the host DNA and becomes a Prophage.

- A. Lytic cycle
- B. Lysogeny
- C. Half lytic cycle
- D. Misogyny

111. In lysogeny the viral DNA of the temperate phage is incorporated into the host DNA and becomes a .....

- A. Prophage
- B. Ketupats
- C. Misogyny
- D. None of the above

112. Sometimes viral DNA is removed from the host's chromosome and the lytic cycle occurs. This process is called .....

- A. Spontaneous induction
- B. Relative spontaneity
- C. Non spontaneous induction
- D. Relative induction

113. The repressor protein make cell resistant to..... from externally infecting phage.

- A. Lysogeny
- B. Temperate
- C. Lytic
- D. Both A and B

114. In some infected cells, multiplication of phage is repressed because late genes required for multiplication and host lysis are switched off and ..... occurs.

- A. Immunity repression
- B. Lysogeny

- C. Both A and B
- D. None of the above

115. Repressor proteins are also called as a..... since the cell is resistant to lysis.

- A. Immunity repressor
- B. Prophage repressor
- C. Lytic repressor
- D. None of the above

116. In lambda phage the maintenance of lysogenic state is the antagonism of repressor..... which prevent immunity.

- A. Immunity repressor
- B. Cro repressor
- C. Both A and B
- D. None of the above

117. The phenomenon in which prophage is able to make changes in the properties of the host bacterium in lysogeny is termed.....

- A. Lytic conversion
- B. Lysogenic conversion
- C. Virulent conversion
- D. Both A and C
- E. None of the above

118. A lambda phage enzyme coded by..... gene directs the insertion of the phage DNA into the bacterial chromosome.

- A. Ent kaurene
- B. Ent synthase
- C. int
- D. Ent

119. Temperate phage ..... have no specificity for insertion and may even be able to insert multiple copies of their DNA into a single bacterial chromosome.

- A. Mu
- B. T4
- C. T2

D. Both B and C

120. Bacteriophages with tail are.....

- A. Motile on bacterial surface
- B. Motile on human body
- C. Motile on plant body
- D. Motile in water bodies

121. Transfer of genetic material through virus is known as.....

- A. Transcription
- B. Transformation
- C. Transduction
- D. Translation

122. Hershey and chase worked on..... and proved that DNA is the genetic material.

- A. Prions
- B. Protozoa
- C. Bacteriophages
- D. Fungus

123. Phage produces are of lysis on a bacterial lawn is known as.....

- A. Plaque
- B. Lytic zone
- C. Zone of inhibition
- D. None of the above

124. Phage reproduction is initiated in lysogenized culture by a process of.....

- A. Induction
- B. Infection
- C. Immigration
- D. Integration

125. Most of the phage's exhibit..... symmetry

- A. Spiral

- B. Helical
- C. Icosahedral
- D. None of the above

126. Contractile sheath of tail is present in..... phage.

- A. T3
- B. T2
- C. T27
- D. P22

127. .... is an RNA dependent RNA polymerase enzyme synthesized by many bacteriophages.

- A. RNA helicase
- B. RNA replicase
- C. RNA ligase
- D. RNA tautomerase

128. .... protein keeps the prophage dormant and prevents virus reproduction.

- A. Repressor
- B. Assembly
- C. Inclusion
- D. Uncoating

129. T even phage binding to E. coli probably involves..... interaction.

- A. Electrostatic
- B. Hydrophobic
- C. Ionic
- D. Covalent

130. .... is a bacterial defense mechanism against bacteriophages.

- A. Restriction
- B. Lysogeny
- C. Lytic cycle
- D. None of the above

131. The filamentous bacteriophage infect male E. coli cell by attaching to .....

- A. The tip of the pilus
- B. Cytoplasm
- C. Cell membrane
- D. None of the above

132. Temperate phages able to have long term relationship with the host known as .....

- A. Virulency
- B. Lysogeny
- C. Lytic cycle
- D. None of the above

133. All tailed phage possess .....

- A. Single stranded RNA
- B. Double stranded RNA
- C. Single stranded DNA
- D. Double stranded DNA

134. ....enzyme is found in bacteriophages.

- A. Lysozyme
- B. Amylase
- C. Oxidoreductase
- D. Protease

135. Transduction in bacteria is mediated by.....

- A. Phage vectors
- B. Plasmid vectors
- C. Plant vectors
- D. None of the above

136. During ..... phase of their replication, the bacteriophage release lysozyme.

- A. Adsorption
- B. Penetration
- C. Replication
- D. Assembly



137. .... chemical is essential for passing of nucleic acid of bacteriophage into bacterium.

- A. Phosphatidyl glycerol
- B. Teichoic acid
- C. Muramic acid
- D. Neuraminic acid

138. .... is the stage following the infection of a cell by a virus during which the presence of virus particles cannot be made out.

- A. Eclipse phase
- B. Assembly phase
- C. Lysogeny phase
- D. None of the above

139. The genetic material of the phage is present in the region.....

- A. Tail
- B. Head
- C. Envelope
- D. Collar

140. .... region of phage is involved in injecting genetic material to the host cell.

- A. Head
- B. Tail
- C. Collar
- D. Neck

141. The genetic material of the phage is surrounded by a .....

- A. Protein coat called capsid
- B. Lipid coat called capsid
- C. Lipid coat called envelope
- D. None of the above

142. The region which connect head and tail of the phage is called as.....

- A. Neck with collar
- B. Tail

- C. Spiral coil
- D. Capsid

143. In phage ..... has contractile protein that injects genetic material to the host cell.

- A. Head
- B. Tail sheath
- C. Collar
- D. Neck

144. In phage ..... Helps in the attachment of phage to host

- A. Base plate
- B. Head plate
- C. Head
- D. Collar

145. In phage ..... attach to specific receptor on the bacterial cell and This structure determines the host specificity of the phage.

- A. Base plate
- B. Tail Fiber
- C. Head plate
- D. All of the above

146. In bacteriophage capsid is made up of.....

- A. Lipid
- B. Protein
- C. Nucleic acid
- D. Carbohydrates

147. Which of the following is an example of head and tail bacteriophage?

- A. M13
- B. Lambda phage
- C. Both A and B
- D. None of the above

148. Approximate size of lambda phage is.....KB

- A. 23
- B. 49
- C. 71
- D. 66

149. 12 nucleotide sticky ends are found in.....

- A. M13 phage
- B. Lambda phage
- C. Both A and B
- D. None of the above

150. Induction of lysogeny takes place because of low level of

- A. CIII gene
- B. CII gene
- C. CI gene
- D. None of the above

151. The base plate of a bacteriophage is attached to tail fiber which are in number.....

- A. 4
- B. 6
- C. 8
- D. 10

152. The shape of the head of a bacteriophage is.....

- A. Helical
- B. Spiral
- C. Pyramidal
- D. Elongated Pyramidal

153. In 1796 ..... First vaccinated and 8-year-old boy with material removed from a cowpox lesion on the hand of a milkmaid.

- A. Voet
- B. Jenner
- C. Pasteur
- D. None of the above

152. In year.....Jenner first vaccinated and 8-year-old boy with material removed from a cowpox lesion on the hand of a milkmaid.

- A. 1776
- B. 1796
- C. 1786
- D. 1781

153. In 1796 Jenner first vaccinated and 8-year-old boy with material removed from a ..... lesion on the hand of a milkmaid.

- A. Cowpox
- B. hepatitis
- C. Influenza
- D. Herpes

154. The term vaccination came from Latin word.....

- A. Venna
- B. Vacca
- C. Variola
- D. None of the above

155. .... is an earlier procedure in which smallpox virus was artificially introduced into a subject to provide protection against natural small pox infection.

- A. Variolation
- B. Pasteurization
- C. Theorization
- D. Stassinization

156. Small pox virus is also known as.....

- A. Variola
- B. Aerial
- C. Simplex
- D. None of the above

157. .... is a disease transmitted to humans by rabid dogs, foxes, wolves, cats, bats, and other animal.

- A. Rabies
- B. Herpes
- C. Influenza
- D. Hepatitis

158. In year 1892 Dmitrii Ivanowski Discovered the causative agent of ..... disease was filterable.

- A. Tobacco mosaic
- B. Influenza
- C. Hepatitis
- D. Rabies

159. In year ..... Dmitrii Ivanowski Discovered the causative agent of tobacco mosaic disease was filterable.

- A. 1884
- B. 1892
- C. 1879
- D. 1894

160. In year 1892 .....Discovered the causative agent of tobacco mosaic disease was filterable.

- A. Lous Pasteur
- B. Jenner
- C. Dmitrii Ivanowski
- D. None of the above

161. .... In 1998 confirmed the work of Dmitrii Ivanowski on tobacco mosaic virus.

- A. Louis
- B. Jenne
- C. Beijerinck
- D. None of the above

163. Beijerinck In..... confirmed the work of Dmitrii Ivanowski on tobacco mosaic virus.

- A. 1994
- B. 1998
- C. 1996
- D. 1967

164. Viruses cannot grow on .....

- A. Living cell
- B. Non-living media
- C. Animals
- D. Plants

165. The discovery of Tobacco mosaic virus occur in the year 1935.

- A. 1992
- B. 1872
- C. 1889
- D. 1935

166. The discovery of ..... virus occur in the year 1935.

- A. Rabies
- B. Tobacco mosaic
- C. Herpes
- D. HIV

167. Max Theiler found in .....that virulent yellow fever virus can be attenuated by serial passage on culture of chick embryo tissue.

- A. 1955
- B. 1937
- C. 1974
- D. 1964

168. .... found in 1937 that virulent yellow fever virus can be attenuated by serial passage on culture of chick embryo tissue.

- A. Louis Pasture
- B. Max Theiler
- C. Beijerinck
- D. None of the above

169. Max Theiler found in 1937 that virulent ..... can be attenuated by serial passage on culture of chick embryo tissue.

- A. yellow fever virus
- B. Small pox
- C. Chicken pox
- D. Rabies

170. Max Theiler found in 1937 that virulent yellow fever virus can be attenuated by serial passage on culture of chick embryo tissue.

- A. Simian cell culture
- B. HeLa cell line
- C. chick embryo tissue
- D. None of the above

171. Ender, Robbins, and Weller laid the foundation for the development of effective poliomyelitis vaccine by culturing the virus of poliomyelitis on monkey kidney cell in 1949.

- A. 1947
- B. 1948
- C. 1949
- D. 1950

172. Ender, Robbins, and Weller laid the foundation for the development of effective poliomyelitis vaccine by culturing the virus of poliomyelitis on ..... in 1949.

- A. MHA
- B. Monkey kidney cell
- C. HeLa
- D. Both A and B

173. Ender, Robbins, and Weller laid the foundation for the development of effective ..... vaccine by culturing the virus of ..... on monkey kidney cell in 1949.

- A. Rabies
- B. Poliomyelitis
- C. Yellow fever
- D. None of the above

174. Ender, Robbins, and ..... laid the foundation for the development of effective poliomyelitis vaccine by culturing the virus of poliomyelitis on monkey kidney cell in 1949.

- A. Jenner
- B. Weller
- C. Wallace
- D. George Lyell

175. Ender, .....and Weller laid the foundation for the development of effective poliomyelitis vaccine by culturing the virus of poliomyelitis on monkey kidney cell in 1949.

- A. Jenner
- B. Robbins
- C. Wallace
- D. George Lyell

176....., Robbins, and Weller laid the foundation for the development of effective poliomyelitis vaccine by culturing the virus of poliomyelitis on monkey kidney cell in 1949.

- A. Ender
- B. Charles Simon
- C. George Lyell
- D. Jenner

177. ....method makes mass growth of viruses possible.

- A. Streak plate method on agar media
- B. Tissue culture method
- C. Butt inoculation
- D. Slat making method

178. The first live attenuated strain of Mesales virus was isolated in..... by Enders after passage of the virus through human kidney cell, human amnion cell, and chick embryo tissue culture.

- A. 1961
- B. 1962
- C. 1963
- D. 1964

179. The first live attenuated strain of Mesales virus was isolated in 1962 by ..... after passage of the virus through human kidney cell, human amnion cell, and chick embryo tissue culture.

- A. Jenner
- B. Ender



- C. Wallace
- D. Saurez

180. The first live attenuated strain of ..... virus was isolated in 1962 by Enders after passage of the virus through human kidney cell, human amnion cell, and chick embryo tissue culture.

- A) Rabies
- B) Herpes
- C) Mesales
- D) None of the above

181. The first live attenuated strain of Mesales virus was isolated in 1962 by Enders after passage of the virus through.....

- A. human kidney cell
- B. human amnion cell
- C. chick embryo tissue culture
- D. All of the above

182. Mesales also known as.....

- A. Rubeola
- B. Rabies
- C. Smallpox
- D. None of the above

183. Mumps vaccine has been available since.....

- A. 1966
- B. 1967
- C. 1968
- D. 1969

184. Mumps vaccine can be prepared from culture.....

- A. Chick fibroblast
- B. Agar media
- C. Gelatin media
- D. None of the above

185. After extensive clinical trials a vaccine to protect against German measles was approved in ..... by U.S Public Health Service for clinical use.

- A. 1969
- B. 1959
- C. 1979
- D. 1989

186. Most of the plant and animal viruses exhibit a characteristic symmetry, ..... symmetry in the case of spherical virus.

- A. Helical
- B. Spiral
- C. Complex
- D. Icosahedral

187. Most of the plant and animal viruses exhibit a characteristic symmetry, Icosahedral symmetry in the case of ..... virus.

- A. Spherical
- B. Rod shaped
- C. Miscellaneous group
- D. All of the above

188. Most of the plant and animal viruses exhibit a characteristic symmetry, ..... symmetry in the case of rod-shaped virus.

- A. Spherical
- B. Icosahedral
- C. Helical
- D. All of the above

189. Most of the plant and animal viruses exhibit a characteristic symmetry, helical symmetry in the case of ..... virus.

- A. Spherical
- B. rod-shaped
- C. Icosahedral
- D. None of the above

190. Most of the plant and animal viruses exhibit a characteristic symmetry, ..... symmetry in the case of miscellaneous virus.

- A. Complex
- B. Icosahedral
- C. Helical
- D. None of the above

191. Most of the plant and animal viruses exhibit a characteristic symmetry, complex symmetry in the case of miscellaneous virus.

- A. Miscellaneous
- B. Rod shaped
- C. Spherical
- D. None of the above

192. In viruses nucleocapsid is made up of.....

- A. Nucleus + Envelope
- B. Nucleus + Capsid
- C. Capsid + Envelope
- D. None of the above

193. In animal viruses nucleocapsid is covered by an outer membrane called as.....

- A. Envelope
- B. Proteome
- C. Capsomer
- D. Nucleomer

194. Animal viruses envelope is made up of .....

- A. Polysaccharide
- B. Lipoprotein
- C. Both A and B
- D. None of the above

195. Virions that have envelope are sensitive to lipid solvents like.....

- A. Ether
- B. Chloroform

- C. Both A and B
- D. None of the above

196. Nonenveloped viruses are referred to as..... virus.

- A. Naked
- B. Open
- C. Capsomer virus
- D. None of the above

197. Which of the following is an icosahedral virus?

- A. Poliomyelitis
- B. Adenovirus
- C. Both A and B
- D. None of the above

198. Adenoviruses causes..... infections.

- A. Respiratory
- B. Kidney
- C. Skin
- D. All of the above

199. Animal viruses with capsid displaying helical symmetry include.....

- A. Measles
- B. Mumps
- C. Influenza
- D. All of the above

200. Animal viruses with capsid displaying helical symmetry include.....

- A. Rabies
- B. Influenza
- C. Both A and B
- D. None of the above

201. In viruses lipoprotein envelope contains fringes which are actually spiked projections made of.....

- A. Glycolipids
- B. Glycoproteins
- C. Polysaccharides
- D. None of the above

202. Which of the following virus structure have most complex structure?

- A. Rabies
- B. Influenza
- C. Poxvirus
- D. Mumps

203. Genome of virus consist of ....

- A. DNA
- B. RNA
- C. DNA or RNA
- D. None of the above

204. Virions which contain single copy of nucleic acid are.....

- A. Nullyploid
- B. Haploid
- C. Diploid
- D. Triploid

205. Viruses which contains single copy of nucleic acid are haploid viruses and the exception is.....

- A. Retrovirus
- B. Rabies
- C. Herpes
- D. None of the above

206..... viruses contain two identical single stranded RNA genomes.

- A. Haploid
- B. Diploid
- C. Triploid
- D. Tetraploid

207. Structure of nucleic acid in the virion is

- A. Linear only
- B. Circular only
- C. Linear or Circular
- D. None of the above

208. The DNA of most viruses is linear molecule of....

- A. ssDNA
- B. dsDNA
- C. ssDNA OR dsDNA
- D. None of the above

209. In some animal viruses like ..... the DNA occurs as a supercoiled circular dsDNA.

- A. Papovavirus
- B. Rabies
- C. Smallpox
- D. All of the above

210. Viral supercoiled DNA is due to the action of enzyme.....

- A. DNA helicase
- B. DNA gyrase
- C. DNA ligase
- D. None of the above

211. The genetic material of adenovirus is .....

- A. Double stranded DNA
- B. Double stranded RNA
- C. Single stranded RNA
- D. Single stranded DNA

212. The genetic material of Parvoviruses is.....

- A. Double stranded DNA
- B. Double stranded RNA
- C. Single stranded RNA
- D. Single stranded DNA

213. Adenovirus and parvovirus exist as inverted repeat sequence that form.....

- A. Clover leaf
- B. Hairpins
- C. Both A and B
- D. None of the above

214. RNA in animals exist only as..... double stranded or single stranded molecule.

- A. Linear
- B. Circular
- C. Spiral
- D. Helical

215. Unlike DNA genome, the RNA genome within a virion may exist as a.....

- A. Circular genome
- B. Segmented genome
- C. Coiled genome
- D. None of the above

216. Reovirus contains ..... different segments of dsRNA.

- A. 6
- B. 8
- C. 10
- D. 12

217. Influenza virus has ..... separate segment of ssRNA.

- A. 6
- B. 8
- C. 10
- D. 12

218. Single stranded viral RNA molecules which function directly as mRNA in the host cell have been designated as Positive sense.

- A. Positive sense
- B. Negative sense

- C. Partial
- D. Seminal

219. Single stranded viral RNA molecules which function directly a ..... in the host cell have been designated as Positive sense.

- A. Single stranded DNA
- B. mRNA
- C. Double stranded DNA
- D. None of the above

220. Single stranded viral ..... molecules which function directly as mRNA in the host cell have been designated as Positive sense.

- A. RNA
- B. DNA
- C. mRNA
- D. tRNA

221. Virus with ..... molecule must first replicate their RNA to form a complementary strand which then act as the mRNA.

- A. Positive strand
- B. Minus strand
- C. Partial
- D. Seminal

222. Virus with minus strand molecule must first replicate their..... to form a complementary strand which then act as the mRNA.

- A. RNA
- B. DNA
- C. mRNA
- D. tRNA

223. Virus with minus strand molecule must first replicate their RNA to form a complementary strand which then act as the .....

- A. RNA
- B. DNA
- C. mRNA



D. tRNA

224. Virus with minus strand molecule must first replicate their RNA to form a .....strand which then act as the mRNA.

- A. Supplementary
- B. Complementary**
- C. Partial
- D. Semi partial

225. ....tumor viruses have two equal positive strand RNA molecules.

- A. RNA**
- B. DNA
- C. RNA or DNA
- D. None of the above

226. RNA tumor viruses have ..... equal positive strand RNA molecules.

- A. Two**
- B. Three
- C. Four
- D. SIX

227. RNA tumor viruses have two equal ..... strand RNA molecules.

- A. Positive**
- B. Negative
- C. Semipositive
- D. Semi negative

228. In papovavirus the basic proteins are regular cellular.....

- A. Acetones
- B. Histones**
- C. Arginine compound
- D. Both B and C

229. In ..... the basic proteins are regular cellular histones.

- A. Adenovirus
- B. Flavivirus
- C. Papovavirus
- D. None of the above

230. RNA molecule replicate to their complementary strand by enzyme

- A. DNA transcriptase
- B. RNA transcriptase
- C. RNA ligase
- D. RNA gyrase

231. The Function of capsid is.....

- A. To determine Antigen specificity of virus
- B. Protect genetic material from nuclease attack
- C. Delivery of genome in infectious form.
- D. All of the above

232. The spike like projection on the viral capsid is known as.....

- A. Capsomer
- B. Peplomer
- C. Both A and B
- D. None of the above

233. Infectious RNA particles without protein coat are called.....

- A. Prions
- B. Protozoa
- C. Viroid
- D. None of the above

234. RNA tumor virus contains an enzyme.....

- A. RNA dependent DNA polymerase
- B. Reverse transcriptase
- C. Both A and B
- D. None of the above

235. .... Virus has the smallest genome.

- A. Rabies
- B. Rubella
- C. Circovirus
- D. TMV

236. The T2 phage is called as.....

- A. Ss DNA phage
- B. Ds DNA phage
- C. Ss RNA phage
- D. Ds DNA phage

237. The shape of tobacco mosaic virus is.....

- A. Rod shaped
- B. Oval shaped
- C. Spiral shaped
- D. Spherical shaped

238. Tobacco mosaic virus is a.....

- A. RNA virus
- B. DNA virus
- C. Bacteriophage
- D. Viroid

239. Viruses are.....

- A. Free living
- B. Obligate parasite
- C. Chloroform and ether loving
- D. None of the above

240. Which of the following virus shown helical symmetry?

- A. HIV
- B. Influenza
- C. TMV
- D. Poxvirus

241. The viral envelope is made up of.....

- A. Glycoprotein
- B. Lipid
- C. Protein
- D. All of the above

242. Which of the following virus has a complex symmetry?

- A. Circovirus
- B. TMV
- C. T4 phage
- D. Adenovirus

243. An icosahedral capsid consist of .....

- A. Hexagonal capsomers
- B. Pentagonal capsomers
- C. Heptameric capsomers
- D. Both A and B

244. Capsomer is an .....

- A. Individual unit of the capsid
- B. Individual unit of envelope
- C. Individual unit of Nucleic acid
- D. None of the above

245. Which of the following is the largest virus?

- A. Circovirus
- B. Megavirus
- C. Adenovirus
- D. Rabies

246. .... are infectious and fully formed virus particles.

- A. Prions
- B. Virions
- C. Viroid

D. All of the above

247. Which of the following disinfectant is effective against viruses?

- A. Formaldehyde
- B. Hydrogen peroxide
- C. Both A and B
- D. None of the above

248. Viruses largely lack metabolic machinery of their own to generate energy or to synthesize.....

- A. Polysaccharide
- B. Proteins
- C. Both A and B
- D. None of the above

249. Viruses require.....

- A. Water
- B. Nutrients
- C. Oxygen
- D. Living cell

250. Reverse transcriptase is a useful enzyme for .....

- A. Conversion of RNA to DNA
- B. Conversion of DNA to RNA
- C. Both A and B
- D. None of the above

251. Usually viruses are separated into several large groups based primarily on

- A. Nature of host
- B. Capsid symmetry
- C. Envelope symmetry
- D. None of the above

252. Which of the following virus has not been associated with human cancer?

- A. Varicella- Zoster virus

- B. HSV type 2
- C. Both A and B
- D. None of the above

253. Viruses in an attenuated vaccine.....

- A. Have no genome
- B. In killed form
- C. Continue to replicate
- D. Can cause infection.

254. Viruses in an attenuated vaccine.....

- A. Live with no or less virulence factor
- B. Killed
- C. Can cause infection
- D. None of the above

255. Enveloped virus have a ..... shape.

- A. Icosahedral
- B. Roughly Spherical
- C. Twisted
- D. Rod like

256. The envelope of ..... virus is derived from the host cell nucleus.

- A. Herpesviruses
- B. Retrovirus
- C. Both A and B
- D. None of the above

257. Which of the following is a diploid/ semi continuous cell line

- A. HeLa
- B. WI-38
- C. Both A and B
- D. None of the above

258. Plant viruses can be cultivated in ....

- A. Tissue culture
- B. Whole plant
- C. Cell culture
- D. All of the above

259. The oncogene theory refers to.....

- A. How viruses transform normal cell to tumor cell
- B. How viruses transform tumor cell to normal cell
- C. How viruses replicate in cancer cell
- D. None of the above

260. A change from lysogeny to lytic is generally induced by.....

- A. Uv light
- B. Chloroform
- C. Ether
- D. None of the above

261. Lysogeny state of virus is governed by the activity of the regulatory region of the lambda phage genomes and this region is termed as.....

- A. Immunity repressor
- B. Immunity operon
- C. Both A and B
- D. None of the above

262. The capsomer consist of a number of protein subunits or molecules called as a.....

- A. Protomers
- B. Cuproproteins
- C. Procapsomer
- D. None of the above

263. Which of the following virus belong to family Flaviviridae?

- A. Rubella
- B. Chickenpox
- C. Hepatitis c
- D. All of the above

264. Which of the following affects proteins and nucleic acid but not viruses?

- A. Denaturation
- B. Enzyme treatment
- C. High temperature
- D. All of the above

265. Which of the following virus belongs to family Calciviridae?

- A. Hepatitis E
- B. Hepatitis B
- C. Hepatitis C
- D. Hepatitis D

266. In simple capsid the capsomer is surrounded by five other capsomers is termed a.....

- A. Polyhedra
- B. Penton
- C. Both A and B
- D. Pentagon

267. .... Phage have no specificity for insertion and may even be able to insert multiple copies of their DNA into a single bacterial chromosome.

- A. Mu
- B. Lambda
- C. Both A and B
- D. None of the above

268. .... Virus carries enzyme neuraminidase

- A. Cholera
- B. Smallpox
- C. Adenovirus
- D. Influenza

269..... which will lyse the bacterial cell releasing the mature virions is present in late genes

- A. Lipase
- B. Lysozymes



- C. Caspases
- D. All of the above

270. Lysozymes which will lyse the bacterial cell releasing the mature virions is present in .....

- A. Early genes
- B. Late genes
- C. Late second phase genes
- D. Early second phase genes

271 Which of the following continuous cell line?

- A. HeLa
- B. HEP2
- C. BHK21
- D. All of the above

272. Which of the following virus is susceptible to chloroform?

- A. Herpes
- B. Hepatitis
- C. Influenza
- D. All of the above

273. Group E phage have.....

- A. ss RNA
- B. ssDNA
- C. ds RNA
- D. ds DNA

274. Viral genome attached to bacterial genome is termed as.....

- A. Prophage
- B. Lys phage
- C. Lytic cycle
- D. None of the above

275. Which of the following is the largest virus?

- A. Pox Virus
- B. Circovirus
- C. Herpes virus
- D. None of the above

276. Potato mosaic disease is caused by.....

- A. Bacteria
- B. Fungi
- C. Virus
- D. Protozoa

277. Mumps is caused by.....

- A. Bacteria
- B. Virus
- C. Protozoa
- D. None of the above

278. AIDS is caused due to .....

- A. Deficiency of T lymphocytes
- B. Low BP
- C. Bacteria and fungi association
- D. None of the above

279. Potato spindle tuber viroid is.....

- A. ss RNA
- B. ds RNA
- C. ss DNA
- D. ds DNA

280. Rabies virus contains.....

- A. ss RNA
- B. ds RNA
- C. ss DNA
- D. ds DNA

281. The protein coat of virus is called.....

- A. Capsule
- B. Pellicle
- C. Capsid
- D. Callus

282. The virus without nucleic acid is called as.....

- A. Prions
- B. Virions
- C. Viroid
- D. None of the above

283. Misfolded proteins which as an infectious agent called as.....

- A. Protozoa
- B. Prions
- C. Satellite virus
- D. None of the above

284. .... resistant proteins are formed in a eukaryotic cell due to virus infection.

- A. Interferons
- B. Antibodies
- C. Cytokines
- D. Auxins

285. .... part of plant is not infected by virus.

- A. Root
- B. Stem
- C. Apical meristem
- D. Leaf

286. Infective unit of virus is called as.....

- A. Virion
- B. Varicella
- C. Nucleosome
- D. None of the above

287. Tungro disease of rice is caused by .....

- A. Combination of two bacteria
- B. Combination of two viruses
- C. Combination of bacteria and virus
- D. Combination of protozoa and virus

288. The name 'Antibiotic' was proposed by.....

- A. Alexander Flamming
- B. Lous Pasteur
- C. Waksman
- D. Brien

289. Which of the given statement about virus is incorrect?

- A. Viruses cannot grow on. artificial media
- B. Viruses are smaller than bacteria
- C. Viruses can perform their metabolic function outside the host except reproduction
- D. Viruses are on the borderline of living and non-living organisms

290. Cauliflower mosaic virus contains.....

- A. ss RNA
- B. ds RNA
- C. ss DNA
- D. ds DNA

291. The structural component that is found in all the viruses is.....

- A. The envelope
- B. DNA
- C. Capsid
- D. Tail fiber

292. Which of the following is not an RNA virus.

- A. Herpes

- B. Adenovirus
- C. Influenza
- D. TMV

293. Which of the following is not an RNA virus.

- A. Retrovirus
- B. Rubella virus
- C. Adenovirus
- D. None of the above

294. The type of cell culture that can reproduce for an extended number of generations and is used to support viral replication is.....

- A. Subcontinuous cell line
- B. Continuous cell line
- C. Primary cell culture
- D. None of the above

295. The process of readily counting bacteriophage is called as.....

- A. Plaque assays
- B. Tissue culture technique
- C. Immunodiffusion
- D. Widal test

296. ....type of viruses contain an enzyme lysozyme to aid in their infection.

- A. Plant virus
- B. Animal virus
- C. Fungal virus
- D. Bacteriophage

297. Viruses that remains latent for many years are most likely .....

- A. Togavirus
- B. Herpesvirus
- C. Rhinovirus
- D. None of the above

298. Enteroviruses differ from rhinoviruses because of.....

- A. Ability to survive acidic conditions
- B. Type of nucleic acid
- C. Capsid shape
- D. None of the above

299. A common polyhedral capsid shape of viruses is a.....

- A. Spherical
- B. Icosahedral
- C. Pyramid
- D. None of the above

300. A chemical compound that is found in all viruses is.....

- A. Protein
- B. Lipid
- C. Glycoprotein
- D. Sphingolipid

301. Viruses multiplies in.....

- A. Soil
- B. Living body
- C. Agar media
- D. None of the above

302. Prophase refers to.....

- A. Viral genome that integrates bacterial genome
- B. Viral genome that lyses host genome
- C. Viral genome that separates out from host cell
- D. None of the above

303. Longest known virus is.....

- A. T1 phage
- B. Citrus tristeza
- C. Both A and B
- D. None of the above

304. Who crystallized and isolate virus for the first time?

- A. W.M Stanely
- B. Louis Pasteur
- C. R. J Smith
- D. None of the above

305. Which of the following plant virus has DNA in it?

- A. TMV
- B. Potato mosaic virus
- C. Cauliflower mosaic virus
- D. None of the above

306. The bacteriophage contain an enzyme known as.....

- A. Lysozyme
- B. Bestozyme
- C. Ascorbate
- D. None of the above

307. Virion is .....

- A. Antiviral agent
- B. Antifungal agent
- C. Virus without nucleic acid
- D. Completely assembled virus outside the host

308. Which of the following disease is caused by virus?

- A. AIDS
- B. Typhoid
- C. Syph
- D. Cholera

309. Which of the following disease is caused by virus?

- A. Candidiasis
- B. Gonorrhoea
- C. Measles

D. Tuberculosis

310. Which of the following disease is caused by virus?

- A. Aspergillosis
- B. Bacillary dysentery
- C. Amebiasis
- D. Herpes

311. Given below are the viral diseases except.....

- A. Hepatitis
- B. Mucormycosis
- C. Herpes
- D. Measles

312. Viral disease have no cure because.....

- A. Viruses can multiply repeatedly within host cell
- B. Viruses contain no genetic material
- C. Viruses contain no cytoplasm
- D. All of the above

313. AIDS virus shows effect on.....

- A. Lymphocytes
- B. Erythrocytes
- C. Thrombocytes
- D. Fibroblast

314. Total ..... ds stranded segments are present in reovirus.

- A. 1
- B. 5
- C. 10
- D. 15

315. Enteroviruses belong to which of the following family?

- A. Flaviviridae



- B. Picornaviridae
- C. Reoviridae
- D. Tymovirus

316. Rous sarcoma virus consist of ..... as its genetic material.

- A. ds DNA
- B. ss DNA
- C. RNA
- D. None of the above

317. Which of the following virus possess an envelope?

- A. Herpesvirus
- B. Reovirus
- C. TMV
- D. None of the above

318. Which of the following viruses have a complex symmetry?

- A. Orthopoxvirus
- B. Alphavirus
- C. Circovirus
- D. None of the above

319. Cowpea virus belongs to which of the following group of viruses?

- A. Cucumovirus
- B. Comovirus
- C. Gentavirus
- D. None of the above

320. For the cultivation of viruses the fertile chick egg should be incubated for how many days?

- A. 5-12
- B. 2-4
- C. 15-17
- D. 1-2

321. Which of the given method is used for the production of vaccine against yellow fever?

- A. Chick embryo method
- B. Plant tissue culture method
- C. Animal tissue culture method
- D. None of the above

322. The Karyotype of cells formed from continuous cell line is .....

- A. Aneuploid
- B. Diploid
- C. Tetraploid
- D. All of the above

323..... is the father of virology.

- A. Louis Pasteur
- B. Charles Lyell
- C. Martinus Beijerinck
- D. John Benjamin

324. Viruses outside the host cell survive as.....

- A. Satellite RNA
- B. Virion
- C. Prion
- D. Protozoa

325. ....phase determines the specificity of virus.

- A. Release
- B. Attachment
- C. Assembly
- D. Penetration

326. .... is the most common capsid shape of the virus.

- A. Spherical
- B. Spiral
- C. Icosahedral
- D. Rod

327. Puumala virus belongs to genus.....

- A. Hantavirus
- B. Alphavirus
- C. Gammavirus
- D. Puumavirus

328. .... virus helps dependovirus for replication.

- A. Rabies
- B. Smallpox
- C. Adenovirus
- D. All of the above

329. Which of the following is not a viral detection method?

- A. Proliferation
- B. Serodiagnosis
- C. Nucleic acid detection
- D. Hematology

330. In most of the plants ..... is present.

- A. ss RNA
- B. ds RNA
- C. ss DNA
- D. ds DNA

331. RSV virus belongs to genus.....

- A. Alphavirus
- B. Pneumovirus
- C. Rhabdovirus
- D. None of the above

332. Mumps virus belongs to genus .....

- A. Rubulavirus
- B. Ebolavirus
- C. Hepadnovirus
- D. Pneumovirus

333. First parainfluenza virus isolated was.....

- A. Sendal virus
- B. Simian virus
- C. Both A and B
- D. None of the above

334. From..... specimen rhinovirus cannot be isolated.

- A. Sputum
- B. cough
- C. Nose
- D. Feces

335. .... is the genome of poliovirus?

- A. ss RNA
- B. ds RNA
- C. ss DNA
- D. ds DNA

336. Which of the given complication occur during the infection of poliovirus?

- A. Lung failure
- B. Kidney failure
- C. Airways obstruction
- D. None of the above

337. Which of the following virus affect the liver?

- A. HSV1
- B. HSV2
- C. HBV
- D. Influenza

338. Measles virus comes under family.....

- A. Flaviviridae
- B. Paramoxyviridae
- C. Togaviridae

D. None of the above

339. .... virus does not use the CXCR4 molecule as a receptor.

- A. HIV1
- B. HIV2
- C. Poliovirus
- D. All of the above

340. .... organelle prevent entry of virus in plant cell.

- A. Cell membrane
- B. Cytoplasm
- C. Cell wall
- D. Mitochondria

341. Rubella virus belongs to family.....

- A. Togaviridae
- B. Flaviviridae
- C. Alphaviridae
- D. None of the above

342. .... virus promote cell death by apoptosis.

- A. HSV1
- B. HSV2
- C. Rubella virus
- D. Myxoma virus

343. Which of the following is not the criteria for the classification of virus host interaction?

- A. Infection time
- B. Symptoms
- C. Proliferation of viruses
- D. Size of virus

344. Influenza virus infect..... organ.

- A. Liver

- B. Kidney
- C. Respiratory system
- D. Lymph node

345. .... is spread by arthropods.

- A. Influenza
- B. Cowpox
- C. Chickenpox
- D. Arbovirus

346. .... virus infect gastrointestinal tract.

- A. Mumps
- B. Influenza
- C. Norwalk
- D. Parvovirus

347. .... is the first cell line derived from human.

- A. HeLa
- B. HEp2
- C. BHK21
- D. Sf 9

348. .... effect by virus causes changes in host organism.

- A. Allergic
- B. Cytopathic
- C. Peltzman
- D. All of the above

349. .... disease is caused by virus and transmitted by mosquito.

- A. Plague
- B. Ebola
- C. Chikungunya
- D. Yellow fever

350. Virus is not the causative agent of the given disease

- A. Herpes
- B. Mumps
- C. Syphilis
- D. Common cold

351. Dengue is caused by .....

- A. Culex
- B. Male anopheles
- C. Aedes aegypti
- D. All of the above

352. Which of the following disease is caused by viral infection.

- A. Influenza
- B. Malaria
- C. Syphilis
- D. All of the above

353. Which of the following disease is not virus infected?

- A. Malaria
- B. Common cold
- C. Flu
- D. Smallpox

354. .... type of protein is found in viruses.

- A. Lyso protein
- B. Lyco protein
- C. Primary protein
- D. Secondary protein

355. Viroid differ from viruses in being

- A. Naked DNA molecule only
- B. Naked RNA molecule only
- C. Satellite DNA
- D. No genetic material

356. HIV is an example of.....

- A. Rhabdovirus
- B. Retrovirus
- C. Adenovirus
- D. Alphavirus

357. Which of the following statement about virus is correct?

- A. Viruses have their own machinery for metabolism
- B. Viruses can grow in artificial non-living media
- C. Viruses are readily killed by antibiotics
- D. Viruses contain either DNA or RNA

358. TMV virus crystallized for the first time by.....

- A. W.M. Stanley
- B. Louis Pasteur
- C. Jenner
- D. None of the above

359. .... character justify living nature of virus.

- A. Proliferation
- B. Mutation ability
- C. Protein synthesis ability
- D. All of the above

360. Which of the following will not grow on enriched agar?

- A. Penicillium
- B. HSV
- C. Mold
- D. Yeast

361. Which of the following is a retrovirus?

- A. HSV1
- B. HSV2
- C. HIV
- D. HBV



362. The first isolated virus was.....

- A. Polio
- B. HIV
- C. TMV
- D. PDV

363. Little leaf disease of brinjal is caused by.....

- A. Protozoa
- B. Virus
- C. Fungi
- D. Algae

364. First vaccine was prepared by.....

- A. Edward Jenner
- B. Petri
- C. Pasteur
- D. None of the above

365. .... is produced after vaccination in human beings.

- A. Antigen
- B. Immunogen
- C. Antibodies
- D. Antibiotics

366. Chickenpox is caused by .....

- A. Varicella virus
- B. Rabies virus
- C. HIV
- D. HSV1

367. Oral vaccine of polio was discovered by.....

- A. Salk and Sabin
- B. Pasteur
- C. Koch

D. None of the above

368. The carries of virus causing yellow fever is.....

- A. Mice
- B. Bugs
- C. Guinea pigs
- D. Mosquitos

369. The group of viruses which causes plant disease is.....

- A. Rusts
- B. Yeasts
- C. Mosaic
- D. Bacteriophages

370. Scientist ..... show that viruses are cause of cancer.

- A. Mendel
- B. Darwin
- C. Dulbecco
- D. None of the above

371. The vectors involved in chikungunya disease are.....

- A. Aedes aegypti
- B. Aedes albopectus
- C. Both A and B
- D. None of the above

372. The genus of chikungunya virus is.....

- A. Alphavirus
- B. Betavirus
- C. Gammavirus
- D. Deltavirus

373. Chikungunya virus comes under family.....

- A. Flaviviridae

- B. Togaviridae
- C. Hepadnoviridae
- D. None of the above

374. The genetic material of chikungunya virus is.....

- A. ss RNA
- B. ds RNA
- C. ss DNA
- D. ds DNA

375. CHIKV RNA is about ..... nucleotide long.

- A. 120
- B. 1200
- C. 12000
- D. 12

376. Which of the following is arboviral disease?

- A. Chikungunya
- B. Dengue
- C. Malaria
- D. Both A and B

377. Which of the following is not a structural protein of CHICKV?

- A. C
- B. E2
- C. Nsp4
- D. 6K

378. Which of the following is not a structural protein of CHICKV?

- A. C
- B. E1
- C. E2
- D. Nsp1

379. The structure of dengue virus is.....

- A. Rod shaped
- B. Spiral
- C. Spherical
- D. None of the above

380. Genetic material of dengue virus is.....

- A. ss RNA
- B. ds RNA
- C. ss DNA
- D. ds DNA

381. Dengue virus belongs to family.....

- A. Togaviridae
- B. Alphaviridae
- C. Flaviviridae
- D. Betaviridae

382. Dengue virus is made up of total..... structural proteins.

- A. 2
- B. 3
- C. 4
- D. 5

383. DENV is made up of following structural proteins except.....

- A. C
- B. PrM
- C. E
- D. NS1

384. Which of the following is not a type of dengue syndrome?

- A. Classical dengue fever
- B. Dengue hemorrhagic fever
- C. Dengue shock syndrome
- D. Dengue malaise syndrome

385. Tab ..... is used in dengue cases which is made up of papaya leaf extract.

- A. Ampicillin
- B. Plarica
- C. Paracetamol
- D. None of the above

386. Influenza virus is ..... in structure.

- A. Rod shaped
- B. Cuboidal
- C. Spherical
- D. Icosahedral

387. Genome of influenza virus is.....

- A. ss RNA
- B. ds RNA
- C. ss DNA
- D. ds DNA

388. The genome of influenza virus contains..... enzyme

- A. RNA dependent RNA polymerase
- B. RNA dependent DNA polymerase
- C. DNA dependent DNA polymerase
- D. None of the above

389. The genome of hepatitis B virus is.....

- A. ss RNA
- B. ds RNA
- C. ss DNA
- D. ds DNA

390. HBV causes ..... cancer

- A. Lung
- B. Liver
- C. Skin
- D. Lymph

391. HBV contains the ..... enzyme.

- A. Reverse transcriptase
- B. Polymerase
- C. Both A and B
- D. None of the above

392. HBV DNA possess the following gene except....

- A. S
- B. C
- C. T
- D. X

393. HBV DNA possess the following gene except....

- A. C
- B. X
- C. P
- D. N

394. HBV is also known as..... Particle.

- A. X
- B. Dane
- C. Gumma
- D. Chancre

395. HBV attaches to ..... cells of host

- A. Kidney
- B. Hepatocyte
- C. Liver
- D. Brain

396. HBV transmitted through.....

- A. Perinatal
- B. Parental
- C. Sexual

D. All of the above

397. Which of the given treatment is best against HBV?

- A. Nucleoside analog
- B. Interferon
- C. Both A and B
- D. None of the above

398. HAV comes under family.....

- A. Picornviridae
- B. Flaviviridae
- C. Togaviridae
- D. Alphaviridae

399. HAV is .....

- A. Cytovirus
- B. Enterovirus
- C. Neurovirus
- D. None of the above

400. The genetic material of HAV is.....

- A. ss RNA
- B. ds RNA
- C. ss DNA
- D. ds DNA

401. Causative agent of herpes is.....

- A. HSV
- B. HIV
- C. HAV
- D. HBV

402. HSV belongs to ..... family.

- A. Flaviviridae
- B. Togaviridae
- C. Alphaviridae
- D. Herpesviridae

403. HSV belongs to ..... subfamily.

- A. Alpha Herpesviridae
- B. Beta Herpesviridae
- C. Gamma Herpesviridae
- D. None of the above

404. HSV 2 is mainly transmitted through.....

- A. Sexual contact
- B. Infected saliva
- C. Droplet nuclei
- D. Direct contact





