

BIOLOGY

101. Prions were discovered by
(1) Prusiner
(2) Gajdusek
(3) Stanley
(4) Temin
102. The fact that best supports the concept that viruses are living is that viruses
(1) Are made up of common chemicals
(2) Duplicate themselves
(3) Cause disease
(4) Penetrate cell membrane
103. The site where the protein coat of virus is synthesized is
(1) Plasma membrane of the host
(2) Mitochondria of the host
(3) RNA of the host
(4) Ribosome of the host
104. Longest known virus is
(1) $\phi \times 174$
(2) TMV
(3) *Citrus tristeza* virus
(4) T₁ phage
105. Viruses have
(1) Chromosomes (2) Ribosomes
(3) Nucleoprotein (4) Carbohydrates
106. The virus responsible for AIDS is an example of a/an
(1) Adeno virus (2) Mosaic virus
(3) T-even virus (4) Retrovirus
107. Viroids have
(1) Single stranded RNA not enclosed by protein coat
(2) Single stranded DNA not enclosed by proteins coat
(3) Double stranded DNA enclosed by proteins coat
(4) Double stranded RNA enclosed by proteins coat
108. Kuru, a human disease is caused by
(1) Viruses
(2) Viroids
(3) PPLO (4) Prions
109. Which of the following is true for viruses?
(1) Occur only inside bacteria
(2) Behave as if they are plants
(3) Are made up of proteins only
(4) Multiply only in host cells
110. Cyanophage is a virus that attacks-
(1) Blue-green algae (2) Bacteria
(3) All plants (4) All animals
111. A substance (a low molecular weight protein) produced by host cells in response to viral infection, that protects other cells against further viral infection is
(1) Phytotoxin (2) Antibody
(3) Interferon (4) Hormone
112. Name the scientist who called viruses as "*Contagium vivum fluidum*"
(1) Beijerinck (2) Twort
(3) d' Herelle (4) Bawden and Perie
113. Virion refers to
(1) Capsid of virus capable of causing infection
(2) Dead virus not capable of causing infection
(3) Nucleic acid of virus not capable of causing infection
(4) Complete form of virus capable of causing infection
114. Coliphage T₂ has
(1) ss RNA (2) ss DNA
(3) ds RNA (4) ds DNA
115. Virus free plants from virus infected plant can be obtained by
(1) Tissue culture
(2) Stem cutting
(3) Shoot apex culture
(4) Phloem culture
116. In the TMV cryptogram, the third pair of symbols is written as E/E. It represents
(1) the type of nucleic acid in virus/strands of nucleic acid
(2) molecular weight of nucleic acid in millions/percentage of nucleic acid in virus
(3) shape of virus/shape of capsid
(4) kind of host/kind of vector
117. Hydrophobia is caused by
(1) Herpes virus (2) Rhabdovirus
(3) HIV virus (4) Pox virus

118. Chemically interferons are
- (1) Glycolipids
 - (2) Glycoproteins
 - (3) Nucleoproteins
 - (4) Polysaccharides
119. Which of the following is a dermatropic viral disease?
- (1) Influenza
 - (2) AIDS
 - (3) Rabies
 - (4) Measles
120. Hereditary matter of virus present with DNA of bacteria of
- (1) Prophage
 - (2) Intron
 - (3) Plasmid
 - (4) Capsid
121. Which of the following human diseases is related to bovine spongiform encephalopathy (BSE)?
- (1) Kala-azar
 - (2) Encephalitis
 - (3) Cerebral spondylitis
 - (4) Creutzfeldt-Jacob disease
122. Virus replicates on
- (1) Agar gel
 - (2) Living culture medium
 - (3) Dead tissue
 - (4) Artificial culture medium
123. Tailed bacteriophages having tail fibres are
- (1) Motile on the surface of bacteria
 - (2) Non-motile
 - (3) Actively motile in water
 - (4) Motile on surface of plant leaves
124. A viral DNA can be made radioactive
- (1) By culturing the viruses on a medium of potato, dextrose and P^{32}
 - (2) By culturing the viruses in a medium of P^{32}
 - (3) By providing P^{32} to a bacterium which has been infected by a virus
 - (4) By providing P^{32} to viruses when they are about to attach the bacteria
125. Plant viruses have mainly
- (1) DNA
 - (2) RNA
 - (3) both DNA or RNA
 - (4) Coiled nucleoid
126. Bouquet stage is characteristics of
- (1) Leptotene of animal cells
 - (2) Zygotene of animal cells
 - (3) Pachytene of plant cells
 - (4) Leptotene of plant cells
127. Prometaphase is characterized by
- (1) Complete disappearing of nuclear membrane
 - (2) Complete formation of spindle fibres
 - (3) Complete formation of inter-zonal fibres
 - (4) Complete polymerization of nucleolus
128. "Phragmoplast" is associated with
- (1) Cytokinesis of animal cell
 - (2) Cytokinesis of plant cell
 - (3) Cell elongation
 - (4) Karyokinesis during cell division
129. Which of the following statement is correct about chiasmata?
- (1) It is responsible for crossing over
 - (2) It is the result of crossing over
 - (3) It occurs during pachytene of prophase
 - (4) It is responsible for genetic variation
130. Absence of Peroxisomes leads to
- (1) Tay Sachs Syndrome
 - (2) Hunter's Syndrome
 - (3) Zellwagner Syndrome
 - (4) Jacob Syndrome
131. The component of centriole, which help in its duplication are known as
- (1) Triplets
 - (2) Massules
 - (3) Hub
 - (4) Satellite DNA
132. Dynein is a protein which help in
- (1) Movement of cilia & flagella
 - (2) Formation of doublet
 - (3) Formation of microfilament
 - (4) Assembly of microtubules
133. Which of the following factor is associated with the assembly of microtubules during cell division?
- (1) Calmodulin
 - (2) Calcium
 - (3) Magnesium
 - (4) All of these
134. Peroxisomes participates actively in
- (1) Glucose metabolism
 - (2) Alcohol metabolism
 - (3) Fat metabolism
 - (4) Purine metabolism
135. Reason of chromosomal movement in anaphase is
- (1) Astral ray
 - (2) Chromocentre
 - (3) Kinetochore
 - (4) Kinetochore and spindle fibres

136. Which of the two events restore the normal number of chromosomes in life cycle?
 (1) Meiosis & fertilization (2) Mitosis & meiosis
 (3) Fertilization & mitosis (4) Only meiosis
137. What happens in interkinesis?
 (1) DNA-replication
 (2) Chromosome duplication
 (3) Preparation of second meiotic division
 (4) All of these
138. Glyoxysomes mainly convert fatty acids into
 (1) Amino acids (2) Purines
 (3) Pyrimidines (4) Carbohydrates
139. In animal, active mitosis can be observed
 (1) At the base of nails (2) At the apex of hairs
 (3) Dermis of skin (4) Glans & root tips
140. Which of the following is incorrect about cell reproduction?
 (1) Daughter cells in meiosis have half the number of chromosome than the parent cell
 (2) The fully formed cell plate is called middle lamella
 (3) M-Phase is process of nuclear division and divided into four stages-prophase, metaphase, anaphase and telophase
 (4) Interphase is metabolically inactive and visible phase of cell cycle
141. How many times a cell has to divide mitotically to produce 256 cells?
 (1) 127 (2) 126
 (3) 128 (4) 255
142. A chromosome has 2 or more
 (1) Chromatids
 (2) Telomeres
 (3) Centromere (4) All of these
143. An egg cell has 10 Pg of DNA in its nucleus. How much amount of DNA will be in this animal at the end of G_2 phase of mitosis?
 (1) 2.5 Pg (2) 5 g
 (3) 5 Pg (4) 40 Pg
144. Terminal meiosis is also called
 (1) Gametic meiosis (2) Sporic meiosis
 (3) Zygotic meiosis (4) Brachymeiosis
145. Colchicine is used in
 (1) Doubling of chromosome
 (2) Breaking of chromosome
 (3) Separation of chromosome
 (4) Doubling of centromere
146. Early prophase is also called spireme stage. In this stage:
 (1) Chromatin fibres are undergoing spiralization
 (2) Chromatids are twisted over each other
 (3) Chromosomes are spirally twisted
 (4) Chromosomes are overlapping one another
147. A bacteria divides every 35 minutes. If a culture containing 10^5 cells per mL is grown for 175 min., What will be the cell concentration per mL after 175 min. ?
 (1) 175×10^5 cells (2) 32×10^5 cells
 (3) 5×10^5 cells (4) 35×10^5 cells
148. Match list I with list II and select the correct answer using the codes given below the lists:
- | List I | List II |
|---|---------------------------|
| a. Pairing of homologous chromosomes | (i) Chiasmata |
| b. Actual interchange of segment between two homologous chromosomes | (ii) Synaptonemal complex |
| c. Protein body formed between paired homologues | (iii) Synapsis |
| d. The cross shaped configuration visible at diplotene stage between homologues | (iv) Crossing over |
- (1) a(iv), b(iii), c(i), d(ii) (2) a(iii), b(iv), c(i), d(ii)
 (3) a(iii), b(iv), c(ii), d(i) (4) a(iv), b(iii), c(ii), d(i)
149. Annulus pore of nucleus has
 (1) 8 microcylinders and nucleoplasmin
 (2) 10 microcylinders with nuclein
 (3) 13 microcylinders with chromatin
 (4) None of these
150. Nucleosomes are present in
 (1) Only in eukaryotic chromosomes
 (2) Only in prokaryotic chromosomes
 (3) Only in viral genome
 (4) All of these