

BIOLOGY

101. Which of the following is considered as a direct evidence for DNA as the genetic material?
 - (1) bacterial transformation experiments by Frederick Griffith
 - (2) It is located on chromosomes
 - (3) The quantity of DNA found in a diploid cell is approximately twice of that in a haploid cell
 - (4) DNA is stable and its constituent atoms are not exchanged as rapidly as those of other cell molecules
102. Which of the following is incorrect regarding the structure of DNA
 - (1) Purine and pyrimidine components occur in equal amounts in a molecule
 - (2) The total molar amount of adenine in any specimen of DNA is always equal to that of thymine
 - (3) Deoxyribose sugar is a five carbon sugar
 - (4) Combination of a base with a sugar molecule is called nucleotide
103. Which of the following is not a requirement for synthesis of charged tRNA ?
 - (1) Mg^{2+}
 - (2) Amino acid
 - (3) Ribose sugar
 - (4) Enzyme amino acyl synthetase
104. Which of the following bases are double ring structure
 - (1) Adenine
 - (2) Cytosine
 - (3) Both
 - (4) None
105. The adjacent nucleotides are connected together by
 - (1) 3 hydrogen bonds
 - (2) 2 hydrogen bonds
 - (3) phosphodiester bonds
 - (4) glycosidic bonds
106. The larger subunit of ribosome combines with 40-S-mRNA-tRNA met complex in prokaryotes using
 - (1) IF I
 - (2) IF II
 - (3) IF I and GTP
 - (4) IF I and Ca^{2+}
107. The two strands of DNA uncoil by the breakdown of hydrogen bonds when treated with
 - (1) high temperature
 - (2) alkali
 - (3) acid
 - (4) all of these
108. RFI during termination of polypeptide synthesis in prokaryotes is specific for
 - (1) UAA and UAG
 - (2) UAA and UGA
 - (3) UGA and UAG
 - (4) UAA and AUG
109. In DNA replication, the okazaki fragments on the lagging strand are joined together by
 - (1) DNA ligase
 - (2) DNA polymerase
 - (3) Primase
 - (4) Helicase
110. A mRNA molecule is produced by
 - (1) Replication
 - (2) Transcription
 - (3) Duplication
 - (4) Translation
111. One species DNA differs from other in its
 - (1) Phosphate group
 - (2) Base sequence
 - (3) Sugars
 - (4) All of these
112. Chargaff's rule states that
 - (1) $A + T = G + C$
 - (2) $A + G = T + C$
 - (3) $A = G, T = C$
 - (4) $A = C, T = G$
113. Which of the classes of RNA molecules carries the amino acids that are added to the growing polypeptide chain?
 - (1) rRNA
 - (2) tRNA
 - (3) mRNA
 - (4) Primary mRNA transcript
114. Which of the following antibiotics inhibits translocation of mRNA along ribosome ?
 - (1) Streptomycin
 - (2) Tetracycline
 - (3) Neomycin
 - (4) Erythromycin
115. If one strand of DNA has the base sequence AAGCAA, the complimentary strand has which of the following sequences?
 - (1) UUCGUU
 - (2) TTCGTT
 - (3) AAGCAA
 - (4) UTCGTU
116. An intervening sequence in a eukaryotic gene that is not an active part of the gene is called a
 - (1) exon
 - (2) intron
 - (3) replicon
 - (4) none of these

117. The phenomenon known as wobble refers to
- (1) the movement of multiple ribosomes along the same mRNA
 - (2) the shifting of the reading frame in a deletion or insertion mutation
 - (3) the ability of tRNA to pair with different codon that may differ in the third base
 - (4) the movement of tRNA from the A to the P site
118. How many structural genes are present in lac operon of *E. coli*
- (1) one
 - (2) two
 - (3) three
 - (4) four
119. Which of the following operates in a catabolic pathway
- (1) induction
 - (2) repression
 - (3) both
 - (4) none of these
120. The tryptophan operon comprises how many structural genes?
- (1) three
 - (2) four
 - (3) five
 - (4) six
121. In tryptophan operon which of the following is required to control operator gene?
- (1) regulator gene only
 - (2) regulator gene and corepressor
 - (3) regulator and aporepressor
 - (4) none of these
122. A gene of operon which synthesizes a repressor protein is
- (1) regulator gene
 - (2) operator gene
 - (3) structural gene
 - (4) promotor gene
123. New strand of DNA are formed in the direction.
- (1) 5' to 3'
 - (2) 4' to 3'
 - (3) 3' to 3'
 - (4) 2' to 3'
124. In case glucose level in the medium containing *E. coli* decreases, the lac-operon starts functioning due to increase in level of
- (1) β -galactosedase
 - (2) Repressor
 - (3) Lactose
 - (4) c-AMP
125. The genes that shuffle from one location to another are called
- (1) walking genes
 - (2) running genes
 - (3) jumping genes
 - (4) none of above
126. Neuroglia in nervous system is a type of
- (1) Vascular tissue
 - (2) Epithelial tissue
 - (3) Muscular tissue
 - (4) Connective tissue
127. Which of the following acts as antibody to help in body defence ?
- (1) Prothrombin
 - (2) Immunoglobulin
 - (3) Globulin
 - (4) Albumin
128. Sebaceous gland of skin is
- (1) Holocrine
 - (2) Merocrine
 - (3) Apocrine
 - (4) Heterocrine
129. Pseudostratified ciliated columnar epithelium usually occurs as the lining of
- (1) Nephron
 - (2) Trachea
 - (3) Respiratory tract
 - (4) Blood vessel
130. Nissle granules are found in
- (1) Axon and cyton
 - (2) Dendrite and cyton
 - (3) Telodendrite
 - (4) In whole neuron
131. Each nerve fibre in a nerve is surrounded by a layer of connective tissue, known as
- (1) Epineurium
 - (2) Perineurium
 - (3) Endoneurium
 - (4) Exoneurium
132. Myelin sheath in cells is synthesised by
- (1) Microglia
 - (2) Oligodendrocytes
 - (3) Schwann cells
 - (4) Neuroglia
133. Find the incorrect match :
- (1) Leukemia – abnormal increase in WBC count
 - (2) Monocyte – largest in number
 - (3) Amphibian RBC – largest among vertebrates
 - (4) Osteoclast – destroy bone
134. Mammary glands are
- (1) apocrine
 - (2) holocrine
 - (3) merocrine
 - (4) endocrine
135. Which one of the following cellular components of the blood is responsible for the production of antibodies?
- (1) Thrombocyte
 - (2) Lymphocyte
 - (3) Monocyte
 - (4) Erythrocyte
136. Which of the following is present in the alveoli of lungs ?
- (1) Simple columnar epithelium
 - (2) Simple cuboidal epithelium
 - (3) Simple squamous epithelium
 - (4) Sensory epithelium

137. Epithelium differs from connective tissue and supporting tissue by the presence of more
 (1) Intercellular substance
 (2) Cellular substance
 (3) Stored material (4) Nucleoli
138. Adipose tissue is found in
 (1) Hump of camel (2) Blubber of whale
 (3) Subcutaneous tissue in man
 (4) All of these
139. Which of the following statements about muscle is true ?
 (1) Smooth muscle is multinucleate
 (2) Differentiated smooth muscle cells retain the ability to undergo cell division
 (3) Cardiac muscle is voluntary
 (4) None of these
140. Transitional epithelium lacks
 (1) Germinative layer (2) Basement membrane
 (3) Many layers (4) Both (1) & (2)
141. Which of the following statements regarding brown fat is correct ?
 (1) It is directly innervated by the parasympathetic nervous system
 (2) It is poorly vascularized
 (3) It produces heat through the uncoupling of the electron transport chain from oxidative phosphorylation
 (4) It functions in unilocular energy storage
142. Squamous cells are
 (1) Thin, flattened and tile-like
 (2) High and wide
 (3) Column-shaped
 (4) Cells which bear cilia
143. Branched tubular glands are found in
 (1) Crypts of Lieberkahn (2) Gastric gland
 (3) Sebaceous gland (4) Sudorific gland
144. The skeletal tissue present in the external ear or pinna of a mammal is in the nature of
 (1) Hyaline cartilage (2) Elastic cartilage
 (3) Fibrous cartilage (4) Calcified cartilage
145. Humerus and femur are
 (1) Investing bone (2) Cartilage bone
 (3) Scleroid bone (4) None of these
146. Nissl granules are present and their work is
 (1) in neuron and help in nutrition and excretion
 (2) in blood and help in coagulation
 (3) in sarcoplasm and help in contraction
 (4) in neuron and help in protein synthesis
147. Nucleus and mitochondria are absent in
 (1) Epithelial cells
 (2) RBCs of frog
 (3) Young mammalian RBCs
 (4) Mature mammalian RBCs
148. The epithelium forming peritoneal lining of coelom is
 (1) Cuboidal (2) Squamous
 (3) Columnar (4) Glandular
149. In 'Ancient mummies', still arteries are intact because of well preserved
 (1) Collagen fibres (2) Elastic fibre
 (3) Reticular fibre (4) None of these
150. Axons serve to
 (1) bring impulse to cytons
 (2) take away impulse from cytons
 (3) bring blood to heart
 (4) none of these