NEET 2021

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Biology Video Solution & Discussion

MATRIX

NEET | JEE Main & Advanced | XI-XII Foundation| VI-X Pre-Foundation

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101. Match List - I with List - II.

List - I	List - II
(a) Protoplast fusion	(i) Totipotency
(b) Plant tissue culture	(ii) Pomato
(c) Meristem culture	(iii) Somaclones
(d) Micropropagation	(iv) Virus free plants

Choose the **correct** answer from the options given below.

	(a)	**(b)**	**(c)**	**(d)**
(1)	(iii)	(iv)	(i)	(ii)
(2)	(iv)	(iii)	(ii)	(i)
(3)	(iii)	(iv)	(ii)	(i)
(4)	(ii)	(i)	(iv)	(iii)

Answer (4)

102. The term used for tranfer of pollen grains from anthers of one plant to stigma of a different plant which, during pollination, brings genetically different types of pollen grains to stigma, is :

(1) Chasmogamy (2) Cleistogamy (3) Xenogamy (4) Geitonogamy

Answer (3)

103. The factor that leads to Founder effect in a population is :

(1) Mutation (2) Genetic drift

(3) Natural selection (4) Genetic recombination

Answer (2)

104. Match **List** - I with **List** - II.

List - I	List - II
(a) Cohesion	(i) More attraction in liquid phase
(b) Adhesion	(ii) Mutual attraction among water molecules
(c) Surface tension	(iii) Water loss in liquid phase
(d) Guttation	(iv) Attraction towards polar surfaces

Choose the **correct** answer from the options given below.

	(a)	**(b)**	**(c)**	**(d)**
(1)	(iii)	(i)	(iv)	(ii)
(2)	(ii)	(i)	(iv)	(iii)
(3)	(ii)	(iv)	(i)	(iii)
(4)	(iv)	(iii)	(ii)	(i)

Answer (3)

105. A typical angiosperm embryo sac at maturity is

(1) 7- nucleate and 7- celled
(2) 8- nucleate and 8- celled
(3) 8- nucleate and 7- celled
(4) 7- nucleate and 8- celled

Answer (3)

106. Amensalism can be represented as :

(1) Species A (–) ; Species B (–)
(2) Species A (+) ;Species B (0)
(3) Species A (–) ; Species B(0)
(4) Species A (+) ;Species B (+)

Answer (3)

107. DNA strands on a gel stained with ethidium bromide when viewed under UV radiation, appear as :

(1) Dark red bands (2) Bright blue bands (3) Yellow bands (4) Bright orange bands

Answer (4)

108. Which of the following stages of meiosis involves division of centromere ?

(1) Anaphase II (2) Telophase II (3) Metaphase I (4) Metaphase II

Answer (1)

109. Which of the following plants is monoecious ?

(1) *Marchantia polymorpha*
(2) *Cyas circinalis*
(3) *Carica papaya*
(4) Chara

Answer (4)

110. The site of perception of light in plants during photoperiodism is :

(1) Axillary bud (2) Leaf (3) Shoot apex (4) Stem

Answer (2)

111. Which of the following are **not** secondary metabolites in plants ?

(1) Vinblastin, curcumin
(2) Rubber, gums
(3) Morphine, codeine
(4) Amino acids, glucose

Answer (4)

112. In the equation GPP–R=NPP

R represents :

(1) Environment factor
(2) Respiration losses
(3) Radiant energy
(4) Retardation factor

Answer (2)

113. Plants follow different pathways in response to environment of phases of life to form different kinds of structures. This ability is called :

(1) Plasticity (2) Maturity (3) Elasticiy (4) Flexibility

Answer (3)

114. The amount of nutrients, such as carbon, nitrogen. phosphorus and calcium present in the soil at any given time, is referred as :

(1) Standing state (2) Standing crop (3) Climax (4) Climax community

Answer (1)

115. Which of the following is an **incorrect** statement ?

(1) The perinuclear space forms a barrier between the materials present inside the nucleus and that of the cytoplasm.

(2) Nuclear pores act as passages for proteins and RNA moecules in both directions between nucleus and cytoplasm.

(3) Mature sieve tube elements possess a conspicuous nucleus and usual cytoplasmic organelles.

(4) Microbodies are present both in plant and animal cells.

Answer (3)

116. Match **List – I** with **List – II.**

List - I	**List - II**
(a) Cells with active cell division capacity	(i) Vascular tissues
(b) Tissue having all cells similar in structure and function	(ii) Meristematic tissue
(c) Tissue having different types of cells	(iii) Sclereids
(d) Dead cells with highly thickened walls and narrow lumen	(iv) Simple tissue

Select the **correct** answer from the options given below.

	(a)	**(b)**	**(c)**	**(d)**
(1)	(i)	(ii)	(iii)	(iv)
(2)	(iii)	(ii)	(iv)	(i)
(3)	(ii)	(iv)	(i)	(iii)
(4)	(iv)	(iii)	(ii)	(i)

Answer (3)

117. The production of gametes by the parents formation of zygotes, the F_1 and F_2 plant can be understood from a diagram called :

(1) Punnett square (2) Net square (3) Bullet square (4) Punch square

Answer (1)

118. Mutations in plant cells can be induced by :

(1) Gamma rays (2) Zeatin (3) Kinetin (4) Infrared rays

Answer (1)

119. The first stable product of CO_2 fixation in sorghum is :

(1) Succinic acid (2) Phosphoglyceric acid (3) Pyruvic acid (4) Oxaloacetic acid

Answer (4)

120. Match **List - I** with **List - II**.

List - I	**List - II**
(a) Cristae	(i) Primary constriction in chromosome
(b) Thylakoids	(ii) Disc-shaped sacs in Golgi apparatus
(c) Centromere	(iii) Infoldings in mitochondria
(d) Cisternae	(iv) Flattened membranous sacs in stroma of plastids

Choose the **correct** answer from the options given below :

	(a)	**(b)**	**(c)**	**(d)**
(1)	(iii)	(iv)	(i)	(ii)
(2)	(ii)	(iii)	(iv)	(i)
(3)	(iv)	(iii)	(ii)	(i)
(4)	(i)	(iv)	(iii)	(ii)

Answer (1)

121. Which of the following statements is **not** correct ?

(1) Pyramid of energy is always upright.

(2) Pyramid of numbers in a grassland ecosystem is upright.

(3) Pyramid of biomass in sea is generally inverted.

(4) Pyramid of biomass in sea is generally upright.

Answer (4)

122. When the centromere is situated in the middle of two equal arms of chromosomes, the chromosome is referred as:

(1) Sub-metacentric (2) Acrocentric (3) Metacentric (4) Telocentric

Answer (3)

123. Which of the following is **not** an application of PCR (Polymerase Chain Reaction)?

(1) Purification of isolated protein (2) Detection of gene mutation

(3) Molecular diagnosis (4) Gene amplification

Answer (1)

124. Genera like *Selaginella* and *Salvinia* produce two kinds of spores. Such plants are known as :

(1) Homosporous (2) Hetrosporous (3) Homosorus (4) Hetrosorus

Answer (2)

125. Inspite of interspecific competition in nature which machanism the competing species might have evolved for their survival ?

(1) Mutualism (2) Predation (3) Resource partioning (4) Competitive release

Answer (3)

126. Gemmae are present in :

(1) Some Gymnosperms (2) Some Liverworts

(3) Mosses (4) Pteridophytes

Answer (2)

127. Which of the following algae produce Carragreen ?

(1) Red algae (2) Blue-green algae (3) Green algae (4) Brown algae

Answer (1)

128. Which of the following is a **correct** sequence of steps in a PCR (Polymerase Chain Reaction) ?

(1) Extension, Denaturation, Annealing (2) Annealing, Denaturation, Extension

(3) Denaturation, Annealing, Extension (4) Denaturation, Extension, Annealing

Answer (3)

129. Which of the following algae contains mannitol as reserve food material ?

(1) *Volvox* (2) *Ulothrix* (3) *Ectocarpus* (4) *Gracilaria*

Answer (3)

130. Diadelphous stamens are found in :

(1) Pea (2) China rose and citrus (3) China rose (4) Citrus

Answer (1)

131. Complete the flow chart on central dogma .

(a) ↷DNA $\xrightarrow{(b)}$ mRNA $\xrightarrow{(c)}$ (d)

(1) (a)-Replication; (b)-Transcription; (c)-Translation; (d)-Protein

(2) (a)-Transduction; (b)-Translation; (c)-Replication;(d)-Protein

(3) (a)-Replication; (b)-Transcription; (c)-Transduction; (d)-Protein

(4) (a)-Translation; (b)-Replication; (c)-Transcription; (d)-Transduction

Answer (1)

132. When gene targetting involving gene amplification is attempted in an individual's tissue to treat disease, it is known as:

(1) Molecular diagnosis (2) Safety testing

(3) Biopiracy (4) Gene therapy

Answer (4)

133. The plant hormone used to destroy weeds in a field is:

(1) 2,4-D (2) IBA (3) IAA (4) NAA

Answer (1)

134. Match **List – I** with **List - II**.

List - I	**List - II**
(a) Lenticels	(i) Phellogen
(b) Cork cambium	(ii) Suberin deposition
(c) Secondary cortex	(iii) Exchange of gases
(d) Cork	(iv) Phelloderm

Choose the **correct** answer from the options given below.

	(a)	**(b)**	**(c)**	**(d)**
(1)	(ii)	(iii)	(iv)	(i)
(2)	(iv)	(ii)	(i)	(iii)
(3)	(iv)	(i)	(iii)	(ii)
(4)	(iii)	(i)	(iv)	(ii)

Answer (4)

135. During the purification process for recombinant DNA technology, addition of chilled ethanol precipitates out :

(1) Histones (2) Polysaccharides (3) RNA (4) DNA

Answer (4)

136. Match **List- I** with **List - II** :

List - I	**List - II**
(a) Protein	(i) C=C double bonds
(b) Unsaturated fatty acid	(ii) Phosphodiester bonds
(c) Nucleic acid	(iii) Glycosidic bonds
(d) Polysaccharide	(iv) Peptide bonds

Choose the **correct** answer from the options given below :

	(a)	**(b)**	**(c)**	**(d)**
(1)	(ii)	(i)	(iv)	(iii)
(2)	(iv)	(iii)	(i)	(ii)
(3)	(iv)	(i)	(ii)	(iii)
(4)	(i)	(iv)	(iii)	(ii)

Answer (3)

137. Match the **Column - I** with **Column - II.**

Column- I	**Column- II**
(a) % ♂♀ $K_{(5)}\ C_{1+2+(2)}\ A_{(9)+1}\ \underline{G}_1$	(i) Brassicaceae
(b) ⊕♂♀ $K_{(5)}\ C_{(5)}\ A_5\ \underline{G}_2$	(ii) liliaceae
(c) ⊕♂♀ $P_{(3+3)}\ A_{3+3}\ \underline{G}_{(3)}$	(iii) Fabaceae
(d) ⊕♂♀ $K_{2+2}\ C_4\ A_{2-4}\ \underline{G}_{(2)}$	(iv) Solanaceae

Choose the **correct** answer from the options given below.

	(a)	**(b)**	**(c)**	**(d)**
(1)	(ii)	(iii)	(iv)	(i)
(2)	(iv)	(iii	(i)	(iii)
(3)	(iii)	(iv)	(ii)	(i)
(4)	(i)	(ii)	(iii)	(iv)

Answer (3)

138. Plasmid pBR322 has Pst I restriction enzyme site within gene amp^R that confers ampicillin resistance. If this enzyme is used for inserting a gene for β-galactoside production and the recombinant plasmid is inserted in an *E.coli* strain

(1) It will lead to lysis of host cell

(2) It will be able to produce a novel protein with dual ability

(3) It will not be able to confer ampicillin resistance to the host cell

(4) The transformed cells will have the ability to resist ampicillin as well as produce β-galactoside

Answer (3)

139. Which the following statements is **correct** ?

(1) Organisms that depend on living plants are called saprophytes.

(2) Some of the organisms can fix atmospheric nitrogen in specialized cells called sheath K cells.

(3) Fusion of two cells is called Karyogamy

(4) Fusion of protoplasms between two motile on non-motile gametes is called plasmogamy.

Answer (4)

140. DNA fingerprinting involves identifying difference in some specific regions in DNA sequence, called as :

(1) Single nucleotides (2) Polymorphic DNA (3) Satellite DNA (4) Repetitive DNA

Answer (4)

141. Select the **correct** pair.

(1) Cells of medullary rays that form part of cambial ring - Interfascicular cambium

(2) Loose parenchyma cells rupturing the epidermis and forming a lens shaped opening in bark - Spongy parenchyma

(3) Large colorless empty cells in the epidermis of grass leaves - Subsidiary cells

(4) In dicot leaves, vascular bundles are surrounded by large thick-walled cells - Conjunctive tissue

Answer (1)

142. In the exponential growth equation

$Nt = N_0e^{rt}$, e represents :

(1) The base of natural logarithms

(2) The base of geometric logarithms

(3) The base of number logarithms

(4) The base of exponential logarithms

Answer (1)

143. Which of the following statements is **incorrect** ?

(1) ATP is synthesized through complex V.

(2) Oxidation- reduction reactions produce proton gradient in respiration.

(3) During aerobic respiration, role of oxygen is limited to the terminal stage.

(4) In ETC (Electron Transport Chain), one molecule of $NADH + H^+$ gives rise to 2 ATP molecules, and one $FADH_2$ gives rise to 3 ATP molecules.

Answer (4)

144. Identify the **correct** statement .

(1) The coding strand in transcription unit is copied to an m RNA

(2) Split gene arrangement is characteristic of prokaryotes.

(3) In capping, methyl guanosine triphosphate is added to the 3' enf of hnRNA.

(4) RNA polymerase binds with Rho factor to terminate the process of transcription in bacteria

Answer (4)

145. In some members of which of the following pairs of families, pollen grains retain their viability for months after release?

(1) Poaceae ; Solanaceae

(2) Rosaceae ; Leguminosae

(3) Poaceae ; Rosaceae

(4) Poaceae ; Leguminosae

Answer (4)

146. Which of the following statements is **incorrect** ?

(1) Grana lamellae have bothPS I and PS II.

(2) Cylic photophosphorylation involves both PS I and PS II

(3) Both ATP and NADPH $+H^+$ are synthesized during non- cyclic photophosphorylation.

(4) Stroma lamellae have PS I only and lack NADP reductase.

Answer (2)

147. Match **List- I** with **List - II**.

List - I	**List - II**
(a) S phase	(i) Proteins are synthesized
(b) G_2 phase	(ii) Inactive phase
(c) Quiescent stage	(iii) Interval between mitosis and initiation of DNA replication
(d) G_1 phase	(iv) DNA replication

Choose the **correct** answer from the options given below.

	(a)	**(b)**	**(c)**	**(d)**
(1)	(iv)	(i)	(ii)	(iii)
(2)	(ii)	(iv)	(iii)	(i)
(3)	(iii)	(ii)	(i)	(iv)
(4)	(iv)	(ii)	(iii)	(i)

Answer (1)

148. What is the role of RNA polymerase III in the process of transcription in eukaryotes ?

(1) Transcribes precursor of sn RNAs

(2) Transcribes only anRNAs

(3) Transcribes rRNAs(28S, 18S and 5.8S)

(4) Transcribes tRNA, 5s rRNA and snRNA

Answer (4)

149. Now a days it is possible to detect the mutated gene causing cancer by allowing radioactive probe to hybridise its complimentary DNA in a clone of cells, followed by its detection using autoradiography because :

(1) Mutated gene does not appear on a photographic film as the probe has no complimentarity with it

(2) Mutated gene does not appear on a photographic film as the probe has complimentarity with it

(3) Mutated gene partially appears on a photographic film

(4) Mutated gene completely and clearly appears on a photographic film

Answer (1)

150. Match **Column - I** with **Column - II**.

Column- I	**Column- II**
(a) *Nitrococcus*	(i) Denitrification
(b) *Rhizobium*	(ii) Conversion of ammonia to nitrite
(c) *Thiobacillus*	(iii) Conversion of nitrite to nitrate
(d) *Nitrobacter*	(iv) Conversion of atmospheric nitrogen to ammonia

Choose the **correct** answer from the options given below.

	(a)	**(b)**	**(c)**	**(d)**
(1)	(iii)	(i)	(iv)	(ii)
(2)	(iv)	(iii)	(ii)	(i)
(3)	(ii)	(iv)	(i)	(iii)
(4)	(i)	(ii)	(iii)	(iv)

Answer (3)

151. The centriole undergoes duplication during :

(1) Metaphase (2) G_2 phase (3) S-phase (4) Prophase

Answer (3)

152. During the process of gene amplification using PCR, if very high temperature is not maintained in the beginning, then which of the following steps of PCR will be affected first ?

(1) Denaturation (2) Ligation (3) Annealing (4) Extension

Answer (1)

153. Which one of the following belongs to the family Muscidae?

(1) Cockroach (2) House fly (3) Fire fly (4) Grasshopper

Answer (2)

154. Which of the following statements **wrongly** represents the nature of smooth muscle ?

(1) Communication among the cells is performed by intercalated discs

(2) These muscles are present in the wall of blood vessels

(3) These muscle have no striations

(4) They are involuntary muscles

Answer (1)

155. Dobson units are used to measure thickness of :

(1) Ozone (2) Troposphere (3) CFCs (4) Stratosphere

Answer (1)

156. Match **List- I** with **List - II**.

List - I	**List - II**
(a) *Aspergillus niger*	(i) Acetic acid
(b) *Acetobacter aceti*	(ii) Lactic acid
(c) *Clostridium butylicum*	(iii) Citric acid
(d) *Lactobacillus*	(iv) Butyric aicd

Choose the **correct** answer from the options given below.

	(a)	**(b)**	**(c)**	**(d)**
(1)	(ii)	(iii)	(i)	(iv)
(2)	(iv)	(ii)	(i)	(iii)
(3)	(iii)	(i)	(iv)	(ii)
(4)	(i)	(ii)	(iii)	(iv)

Answer (3)

157. Succus entericus is referred to as :

(1) Gastric juice (2) Chyme (3) Pancreatic juice (4) Intestinal juice

Answer (4)

158. Match **List- I** with **List - II** :

	List-I		**List-II**
(a)	Metamerism	(i)	Coelenterata
(b)	Canal system	(ii)	Ctenophora
(c)	Comb plates	(iii)	Annelida
(d)	Cnidoblasts	(iv)	Porifera

Choose the **correct** answer from the options given below :

	(a)	**(b)**	**(c)**	**(d)**
(1)	(iii)	(iv)	(ii)	(i)
(2)	(iv)	(i)	(ii)	(iii)
(3)	(iv)	(iii)	(i)	(ii)
(4)	(iii)	(iv)	(i)	(ii)

Answer (1)

159. Receptors for sperm binding in mammals are present on :

(1) Perivitelline space (2) Zona pellucida (3) Corona radiata (4) Vitelline membrane

Answer (2)

160. Which one of the following is an example of Hormone releasing IUD ?

(1) Cu-7 (2) Multiload -375 (3) Cu-T (4) LNG-20

Answer (4)

161. Veneral diseases can spread through :

(a) Using sterile needles

(b) Transfusion of blood from infected person

(c) Infected mother to foetus

(d) Kissing

(e) Inheritance

Choose the **correct** answer from the options given below :

(1) (b) and (c) only (2) (a) and (c) only (3) (a), (b) and (c) only (4) (b), (c) and (d) only

Answer (1)

162. Which one of the following organisms bears hollow and pneumatic long bones ?

(1) *Macropus* (2) *Ornithorhynchus* (3) *Neophron* (4) *Hemidactylus*

Answer (3)

163. The partial pressures (in mm Hg) of oxygen (O_2) and carbon dioxide (CO_2) at alveoli (the site of diffusion) are:

(1) pO_2 = 95 and pCO_2 = 40 (2) pO_2 = 159 and pCO_2 = 0.3

(3) pO_2 = 104 and pCO_2 = 40 (4) pO_2 = 40 and p O_2 = 45

Answer (3)

164. If Adenine makes 30% of the DNA molecule, what will be the percentage of Thymine, Guanine and Cytosine in it ?

(1) T : 30 ; G : 20 ; C : 20 (2) T : 20 ; G : 25 ; C : 25

(3) T : 20 ; G : 30 ; C : 20 (4) T : 20 ; G : 20 ; C : 30

Answer (1)

165. In a cross between a male and female, both heterozygous for sickle cell anaemia gene, what percentage of the progeny will be diseased ?

(1) 25 % (2) 100% (3) 50 % (4) 75 %

Answer (1)

166. For effective treatment of the disease, early diagnosis and understanding its pathophysiology is very important. Which of the following molecular diagnostic techniques is very useful for early detection ?

(1) ELISA Technique (2) Hybridization Technique

(3) Western Blotting Technique (4) Southern Blotting Technique

Answer (1)

167. Read the following statements :

(a) Metagenesis is observed in Helminths

(b) Echinoderms are triploblastic and coelomate animals

(c) Round worms have organ-system level of body organization

(d) Comb plates present in ctenophores help in digestion

(e) Water vascular system is characteristic of Echinoderms

Choose the **correct** answer from the options given below :

(1) (a), (d) and (e) are correct
(2) (b), (c)and (e) are correct
(3) (c), (d) and (e) are correct
(4) (a), (b) and (c)are correct

Answer (2)

168. Match **List - I** with **List - II**.

	List-I		**List-II**
(a)	Valults	(i)	Entry of sperm through Cervix is blocked
(b)	IUDs	(ii)	Removal of Vas deferens
(c)	Vasectomy	(iii)	Phagocytosis of sperms within the Uterus
(d)	Tubectomy	(iv)	Removal of fallopian tube

Choose the **correct** answer from the options given below :

	(a)	**(b)**	**(c)**	**(d)**
(1)	(ii)	(iv)	(iii)	(i)
(2)	(iii)	(i)	(iv)	(ii)
(3)	(iv)	(ii)	(i)	(iii)
(4)	(i)	(iii)	(ii)	(iv)

Answer (4)

169. Persons with 'AB' blood group are called as "Universal recipients". This is due to :

(1) Presence of antibodies, anti-A and anti-B on RBCs

(2) Absence of antibodies, anti-A and anti-B, in plasma

(3) Absence of antigens A and B on the surface of RBCs

(4) Absence of antigens A and B in plasma

Answer (2)

170. With regard to insulin choose correct options :

(a) C-peptide is not present in mature insulin

(b) The insulin produced by rDNA technology has C-pepide

(c) The pro-insulin has C-peptide

(d) A- peptide and B-peptide of insulin are interconnected by disulphide bridges

Choose the **correct** answer from the option given below.

(1) (a), (c) and (d) only (2) (a) and (d) only

(3) (b) and (d) only (4) (b) and (c) only

Answer (1)

171. Chronic auto immune disorder disorder affecting neuro muscular junction leading to fatigue, weakening and paralysis of skeletal muscle is called as :

(1) Myasthenia gravis (2) Gout (3) Arthritis (4) Muscular dystophy

Answer (1)

172. The organelles that are included in the endomembrane system are :

(1) Golgi complex, Mitochondria, Ribosomes and Lysosomes

(2) Golgi complex, Endoplasmic reticulum Mitochondria and Lysosomes

(3) Endoplasmic reticulum, Mitochondria Ribosomes and Lysosomes

(4) Endoplasmic reticulum, Golgi complex Lysosomes and Vacuoles

Answer (4)

173. The fruit fly has 8 chromosomes (2n) in each cell. During interphase of Mitosis if the number of chromosomes at G_1 phase is 8, what would be the number of chromosomes after S phase?

(1) 4 (2) 32 (3) 8 (4) 16

Answer (3)

174. Which of the "only enzyme" that has "Capability" to catalyse Initiation, Elongation and Termination in the process of transcription in prokaryotes?

(1) DNA Ligase (2) DNase

(3) DNA dependent DNA polymerase (4) DNA dependent RNA polymerase

Answer (4)

175. Select the favourable conditions required for the formation of oxyhaemoglobin at the alveoli :

(1) High pO_2, high pCO_2, less H+, higher temperature

(2) Low pO_2, low pCO_2, more H+, higher temperature

(3) High pO_2, low pCO_2, less H+, lower temperature

(4) Low pO_2, high pCO_2, more H+, higher temperature

Answer (3)

176. Match the following :

	List-I		**List-II**
(a)	Physalia	(i)	Pearl oyster
(b)	Limulus	(ii)	Portuguese Man of War
(c)	Ancylostoma	(iii)	Living fossil
(d)	Pinctada	(iv)	Hookworm

Choose the **correct** answer from the options given below :

	(a)	**(b)**	**(c)**	**(d)**
(1)	(ii)	(iii)	(iv)	(i)
(2)	(i)	(iv)	(iii)	(ii)
(3)	(ii)	(iii)	(i)	(iv)
(4)	(iv)	(i)	(iii)	(ii)

Answer (1)

177. Which of the following RNAs is not required for the synthesis of protein?

(1) rRNA (2) siRNA (3) mRNA (4) tRNA

Answer (2)

178. Which enzyme is responsible for the conversion of inactive fibrinogens to fibrins ?

(1) Epinephrine (2) Thrombokinase (3) Thrombin (4) Renin

Answer (3)

179. Erythropoietin hormone which stimulates R.B.C. formation is produced by :

(1) The cells of bone marrow
(2) Juxtaglomerular cells of the kidney
(3) Alpha cells of pancreas
(4) The cells of rostral adenohypophysis

Answer (2)

180. Which stage of meiotic prophase shows terminalisation of chiasmata as its distinctive feature ?

(1) Diakinesis (2) Pachytene (3) Leptotene (4) Zygotene

Answer (1)

181. Sphincter of oddi is present at :

(1) Gastro-oesophageal junction
(2) Junction of jejunum and duodenum
(3) Ileo-caecal junction
(4) Junction of hepato-pancreatic duct and duodenum

Answer (4)

182. Which of the following characteristics is **incorrect** with respect to cockroach ?

(1) In females, 7^{th}-9^{th} sterna together form a genital pouch.
(2) 10th abdominal segment in both sexes, bears a pair of anal cerci.
(3) A ring of gastric caeca is present at the junction of midgut and hind gut.
(4) Hypopharynx lies within the cavity enclosed by the mouth parts.

Answer (3)

183. Which of the following is not an objective of Biofortification in crops ?

(1) Improve vitamin content
(2) Improve micronutrient and mineral content
(3) Improve protein content
(4) Improve resistance to diseases

Answer (4)

184. Identify the **incorrect** pair :

(1) Lectins – Concanavalin A
(2) Drugs – Ricin
(3) Alkaloids – Codeine
(4) Toxin – Abrin

Answer (2)

185. A specific recognition sequence identified by endonucleases to make cuts at specific positions within the DNA is :

(1) Palindromic Nucleotide sequences
(2) Poly (A) tail sequences
(3) Degenerate primer sequence
(4) Okazaki sequences

Answer (1)

186. Match **List - I** with **List – II.**

List - I	**List - II**
(a) Allen's Rule	(i) Kangaroo rat
(b) Physiological adaptation	(ii) Desert lizard
(c) Behavioural adaption	(iii) Marine fish at depth
(d) Biochemical adaption	(iv) Polar seal

Choose the **correct** answer from the options given below.

	(a)	**(b)**	**(c)**	**(d)**
(1)	(iv)	(i)	(ii)	(iii)
(2)	(iv)	(iii)	(ii)	(i)
(3)	(iv)	(ii)	(iii)	(i)
(4)	(iv)	(i)	(iii)	(ii)

Answer (1)

187. **Statement I :**

The codon 'AUG' codes for methionine and phenylalanine.

Statement II :

'AAA' and 'AAG' both codons code for the amino acid lysine.

In the light of the above statements, choose the **correct** answer from the options given below.

(1) **Statement I** is correct but **Statement II** is false

(2) **Statement I** is incorrect but **Statement II** is true

(3) Both **Statement I** and **Statement II** are true

(4) Both **Statement I** and **Statement II** are false

Answer (2)

188. Match **List-I** with **List-II**.

	List-I		**List-II**
(a)	Scapula	(i)	Cartilaginous joints
(b)	Cranium	(ii)	Flat bone
(c)	Sternum	(iii)	Fibrous joints
(d)	Vertebralcolumn	(iv)	Triangular flat bone

Choose the **correct** answer from the options given below.

	(a)	**(b)**	**(c)**	**(d)**
(1)	(iv)	(ii)	(iii)	(i)
(2)	(iv)	(iii)	(ii)	(i)
(3)	(i)	(iii)	(ii)	(iv)
(4)	(ii)	(iii)	(iv)	(i)

Answer (2)

189. **Assertion (A) :** A person goes to high altitude and experiences 'altitude sickness' with symptoms like breathing difficulty and heart palpitations.

Reason (R) : Due to low atmospheric pressure at high altitude, the body does not get sufficient oxygen.

In the light of the above statements, choose the correct answer from the options given below.

(1) **(A)** is true but **(R)** is false

(2) **(A)** is false but **(R)** is true

(3) Both **(A)** and **(R)** are true and **(R)** is the correct explanation of **(A)**

(4) Both **(A)** and **(R)** are true but **(R)** is not the correct explanation of **(A)**

Answer (3)

190. Following are the statements about prostomium of earthworm :

(a) It serves as a covering for mouth

(b) It help to open cracks in the soil into which it can crawl

(c) It is one of the sensory structures

(d) It is the first body segment

Choose the **correct** answer from the options given below :

(1) (a), (b), (c) and (d) are correct

(2) (b) and (c) are correct

(3) (a), (b) and (c) are correct

(4) (a), (b) and (d) are correct

Answer (3)

191. Identify the types of cell junctions that help to stop the leakage of the substances across a tissue and facilitate communication with neighbouring cells via rapid transfer of ions and molecules :

(1) Adhering junctions and Tight junctions respectively

(2) Adhering junctions and Gap junctions respectively

(3) Gap junctions and Adhering junctions respectively

(4) Tight junctions and Gap junctions respectively

Answer (4)

192. Which of these is not an important component of initiation of parturition in humans?

(1) Release of oxytocin

(2) Release of prolactin

(3) Increase in estrogen and progesterone ratio

(4) Synthesis of prostaglandins

Answer (2)

193. Match **List-I** with **List-II** :

List - I	**List - II**
(a) Adaptive radiation	(i) Selection of resistance varieties due to excessive use of herbicides and pesticides
(b) Convergent evolution	(ii) Bones of forelimbs in Man and Whale
(c) Divergent evolution	(iii) Wings of Butterfly and Bird
(d) Evolution by anthropogenic action	(iv) Darwin finches

Choose the **correct** answer from the options given below :

	(a)	**(b)**	**(c)**	**(d)**
(1)	(ii)	(i)	(iv)	(iii)
(2)	(i)	(iv)	(iii)	(ii)
(3)	(iv)	(iii)	(ii)	(i)
(4)	(iii)	(ii)	(i)	(iv)

Answer (3)

194. The Adenosine deaminase deficiency results into :

(1) Digestive disorder

(2) Addison's disease

(3) Dysfunction of immune system

(4) Parkinson's disease

Answer (3)

195. Match **List-I** with **List-II** :

List - I	**List - II**
(a) Filariasis	(i) *Haemophilus influenzae*
(b) Amoebiasis	(ii) *Trichophyton*
(c) Pneumonia	(iii) *Wuchereria bancrofti*
(d) Ringworm	(iv) *Entamoeba histolytica*

Choose the **correct** answer from the options given below :

	(a)	**(b)**	**(c)**	**(d)**
(1)	(i)	(ii)	(iv)	(iii)
(2)	(ii)	(iii)	(i)	(iv)
(3)	(iv)	(i)	(iii)	(ii)
(4)	(iii)	(iv)	(i)	(ii)

Answer (4)

196. Which of the following is **not** a step in Multiple Ovulation Embryo Transfer Technology (MOET) ?

(1) Cow is fertilised by artificial insemination

(2) Fertilised eggs are transferred to surrogate mothers at 8-32 cell stage

(3) Cow is administered hormone having LH like activity for super ovulation

(4) Cow yields about 6-8 eggs at a time

Answer (3)

197. During muscular contraction which of the following events occur ?

(a) 'H' zone disappears

(b) 'A' band widens

(c) 'I' band reduces in width

(d) Myosine hydrolyzes ATP, releasing the ADP and Pi

(e) 'Z' lines attached to actins are pulled inwards

Choose the **correct** answer from the options given below :

(1) (b), (c), (d), (e) only

(2) (b), (d), (e), (a) only

(3) (a), (c), (d), (e) only

(4) (a), (b), (c), (d) only

Answer (3)

198. Following are the statements with reference to 'lipids' :

(a) Lipids having only single bonds are called unsaturated fatty acids

(b) Lecithin is a phospholipid

(c) Trihydroxy propane is glycerol

(d) Palmitic acid has 20 carbon atoms including carboxyl carbon

(e) Arachidonic acid has 16 carbon atoms

Choose the **correct** answer from the options given below :

(1) (b) and (c) only (2) (b) and (e) only (3) (a) and (b) only (4) (c) and (d) only

Answer (1)

199. Which one of the following statements about Histones is **wrong** ?

(1) Histones are rich in amino acids - Lysin and Arginine.

(2) Histones carry positive charge in the side chain.

(3) Histones are organized to form a unit 8 molecules.

(4) The pH of histones is slightly acidic.

Answer (4)

200. Which of the following secretes the hormones relaxin, during the later phase of pregnancy ?

(1) Foetus (2) Uterus (3) Graafian follicle (4) Corpus luteum

Answer (4)