

91. Given below are two statements :

Statement I : The class name Reptilia refers to creeping or crawling mode of locomotion.

Statement II : All organisms belonging to Reptilia have three chambered heart. In the light of the above statements, choose the **most appropriate** answer from the options given below :

- (1) **Statement I** is incorrect but **Statement II** is correct
- (2) Both **Statement I** and **Statement II** are correct
- (3) Both **Statement I** and **Statement II** are incorrect
- (4) **Statement I** is correct but **Statement II** is incorrect

92. How many turns of Calvin cycle are required for the formation of three molecules of glucose ?

- (1) 18 (2) 6
- (3) 3 (4) 1

93. Photorespiration reaction catalyzed by RuBisCo is shown below :



Identify "X" from the given options :

- (1) Malate
- (2) Phosphoenolpyruvate
- (3) 2-Phosphoglycolate
- (4) Oxaloacetate

94. Given below are two statements :

Statement I : In gymnosperms, the male and female gametophytes remain within the sporangia.

Statement II : In gymnosperms, seeds are not covered.

In the light of the above statements, choose the **most appropriate** answer from the options given below :

- (1) **Statement I** is incorrect but **Statement II** is correct
- (2) Both **Statement I** and **Statement II** are correct
- (3) Both **Statement I** and **Statement II** are incorrect
- (4) **Statement I** is correct but **Statement II** is incorrect

95. How many molecules of pyruvic acid are produced at the end of glycolysis from 206 molecules of glucose ?

- (1) 412
- (2) 206
- (3) 309
- (4) 103

96. Match List-I with List-II.

List-I

List-II

- A. Fusion of protoplasts I. Meiosis between gametes
- B. Fusion of two nuclei II. Plasmogamy
- C. Generation of haploid spores III. Karyogamy

Choose the correct answer from the options given below :

- (1) A-I, B-III, C-II
- (2) A-II, B-III, C-I
- (3) A-II, B-I, C-III
- (4) A-III, B-II, C-I

97. Mitochondrial inner membrane encloses _____.

- (1) aqueous humor
- (2) matrix
- (3) cytosol
- (4) mucus

98. Phyllotaxy is the pattern of arrangement of _____.

- (1) sepals
- (2) leaves
- (3) flowers
- (4) fruits

99. Mad cow disease is caused by _____.

- (1) *Mycoplasma sp.*
- (2) prions
- (3) viroids
- (4) *Aspergillus sp.*

100. Cell theory was formulated by _____.

- (1) Antonie Von Leeuwenhoek
- (2) Schleiden and Schwann
- (3) Robert Brown
- (4) Singer and Nicolson

101. Which of the following plant growth regulators promotes internode elongation prior to flowering in cabbage ?

- (1) Ethephon
- (2) Absciscic acid
- (3) Gibberellin
- (4) Indole butyric acid

102. Which pigment has absorption peak at 700 nm in the photosynthetic reaction centre PS I (P700) ?

- (1) Carotenoids
- (2) Chlorophyll b
- (3) Chlorophyll a
- (4) Xanthophylls

103. Sphenopsida class belongs to _____.

- (1) pteridophytes
- (2) bryophytes
- (3) angiosperms
- (4) gymnosperms

104. Which of the following represents the correct sequence of arrangement of bones in the lower limb of humans ?

- (1) Femur-tarsal-patella-tibia
- (2) Femur-tibia-patella-tarsal
- (3) Patella-femur-tibia-tarsal
- (4) Femur-patella-tibia-tarsal

105. Which of the following plant growth regulators is used as herbicide ?

- (1) Gibberellin
- (2) 2,4-D
- (3) Kinetin
- (4) Absciscic acid

106. Genus represents _____.

- (1) a group of closely related families
- (2) an individual plant or animal
- (3) a population of plants and animals
- (4) a group of closely related species

107. The plastid that stores xanthophyll is known as _____

- (1) amyloplast
 (2) chloroplast
 (3) chromoplast
 (4) aleuroplast

108. In water, frogs respire using _____

- (1) trachea
 (2) skin
 (3) buccal cavity
 (4) lungs

109. Which of the following is not a characteristic of chordates ?

- (1) Presence of post anal part (tail)
 (2) Presence of notochord
 (3) Central nervous system is dorsal
 (4) Absence of gills

110. Smooth endoplasmic reticulum _____

- (1) is a site for the synthesis of carbohydrates
 (2) has ribosomes attached to its surface
 (3) is the major site for the synthesis of lipids
 (4) is actively involved in protein synthesis

111. Which of the following are characteristics of prokaryotic cells ?

- (a) Ribosomes are made of 50S and 30S subunits
 (b) They can have plasmids
 (c) They contain mesosome
 (d) They have peroxisomes

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

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

112. Match List-I with List-II.

List-I

List-II

- A. Cristae I. Flat membrane sacs in stroma of chloroplast
 B. Cisternae II. Infoldings in mitochondria
 C. Thylakoids III. Cell membrane
 D. Phospholipid IV. Disc shaped sacs in the Golgi apparatus

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

- (1) A-IV, B-III, C-I, D-II
 (2) A-III, B-IV, C-I, D-II
 (3) A-II, B-IV, C-I, D-III
 (4) A-II, B-IV, C-III, D-I

113. Which of the following statements related to pituitary gland are **correct** ?

- (a) It is divided anatomically into adenohypophysis and neurohypophysis
 (b) It secretes follicle stimulating hormone
 (c) It secretes melanocyte stimulating hormone
 (d) It does not secrete prolactin

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

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

114. Which of the following statements regarding photorespiration are correct ?

- (a) Do not occur in C₃ plants
 (b) CO₂ is consumed and O₂ is generated
 (c) Phosphoglycolate is formed
 (d) No synthesis of ATP and NADPH

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

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

115. Which of the following statements is incorrect ?

- (1) Fibrinogen is produced from fibrin ~~X~~
- (2) Blood coagulates in response to an injury ✓
- (3) Blood clot consists of fibrins ✓
- (4) Fibrin is produced from fibrinogen ✓

116. Arrange the following taxonomic categories in ascending order.

- (a) Genus (2)
- (b) Class (1)
- (c) Order (3)
- (d) Phylum (4)
- (e) Family (5)
- (f) Kingdom (6)

Choose the correct answer from the options given below :

- (1) (f), (c), (b), (g), (d), (e), (a)
- (2) (g), (a), (e), (c), (b), (d), (f) ✓
- (3) (a), (c), (d), (g), (f), (b), (e)
- (4) (g), (c), (d), (b), (e), (a), (f)

117. Select the correct sequence of experiments that led to a gradual understanding of photosynthesis in green plants.

- (1) Production of glucose → role of air → release of oxygen → absorption spectra of chlorophyll a and b
- (2) Absorption spectra of chlorophyll a and b → production of glucose → release of oxygen → role of air ✓
- (3) Role of air → release of oxygen → production of glucose → absorption spectra of chlorophyll a and b.
- (4) Release of oxygen → production of glucose → absorption spectra of chlorophyll a and b → role of air ✓

118. Match List-I with List-II.

| List-I | List-II |
|-------------------|------------------------|
| A. Starch | I. Fights infection |
| B. Antibody | II. Energy storage |
| C. Concanavalin A | III. Glucose transport |
| D. Glut-4 | IV. Lectin |

Choose the correct answer from the options given below :

- (1) A-I, B-II, C-III, D-IV
- (2) A-I, B-II, C-IV, D-III
- (3) A-II, B-I, C-IV, D-III ✓
- (4) A-II, B-I, C-III, D-IV

119. The number of vertebrae in a human is _____

- (1) 206
- (2) 7
- (3) 12
- (4) 26 ✓

120. Endomembrane system includes _____

- (1) Golgi complex, chloroplast, peroxisomes and vacuole ✓
- (2) endoplasmic reticulum, Golgi complex, lysosomes and vacuole ✓
- (3) endoplasmic reticulum, chloroplast, peroxisomes and vacuole ✓
- (4) mitochondria, chloroplast, peroxisomes and vacuole ✓

121. Length of the stem at time 0 is 20 cm. The arithmetic growth rate is 30 cm per day. What is the length of the stem at the end of the 7th day ?

- (1) 460 cm
- (2) 50 cm
- (3) 170 cm
- (4) 230 cm ✓

122. Match List-I with List-II.

| List-I | List-II |
|--------------|---------------|
| A. Spherical | I. Vibrio |
| B. Rod | II. Cocci |
| C. Comma | III. Spirilla |
| D. Spirillum | IV. Bacilli |

Choose the correct answer from the options given below :

- (1) A-II, B-IV, C-I, D-III
- (2) A-I, B-III, C-II, D-IV
- (3) A-III, B-II, C-I, D-IV ✓
- (4) A-II, B-I, C-IV, D-III

123. The number of action potentials generated by sino-arterial node (SAN) in a healthy human is _____ per minute.

- (1) 120 - 140
- (2) 28 - 30
- (3) 70 - 75 ✓
- (4) 100 - 110

G.T. (1)

7x30
210
20

124. Match List-I with List-II.

| List-I | List-II |
|-----------|---------------------|
| A. Family | I. Sapindales |
| B. Genus | II. Dicotyledonae |
| C. Class | III. Anacardiaceae |
| D. Phylum | IV. Angiospermae |
| E. Order | V. <i>Mangifera</i> |

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

- (1) A-III, B-V, C-II, D-IV, E-I
 (2) A-I, B-V, C-II, D-IV, E-III
 (3) A-II, B-I, C-III, D-IV, E-V
 (4) A-II, B-III, C-V, D-I, E-IV

125. Which of the following is **not** a part of human central neural system ?

- (1) Pericardium
 (2) Arachnoid
 (3) Dura mater
 (4) Pia mater

126. Given below are two statements :

Statement I : Chromosomes are fully condensed at the end of prophase I.

Statement II : Meiosis I resembles mitosis.

In the light of the above statements, choose the **most appropriate** answer from the options given below :

- (1) **Statement I** is incorrect, but **Statement II** is true
 (2) Both **Statement I** and **Statement II** are true
 (3) Both **Statement I** and **Statement II** are false
 (4) **Statement I** is correct, but **Statement II** is false

127. Match List-I with List-II.

| List-I | List-II |
|------------------------------|----------------------|
| A. Marginal placentation | I. <i>Argemone</i> |
| B. Axile placentation | II. Tomato |
| C. Parietal placentation | III. <i>Primrose</i> |
| D. Free central placentation | IV. Pea |

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

- (1) A-IV, B-II, C-I, D-III
 (2) A-II, B-IV, C-I, D-III
 (3) A-IV, B-II, C-III, D-I
 (4) A-IV, B-III, C-I, D-II

128. Symbiotic association between fungi and algae are called _____.

- (1) chrysophytes
 (2) lichens
 (3) sponges
 (4) mycorrhiza

129. Which of the following is **not** a prokaryote ?

- (1) Fungi
 (2) Bacteria
 (3) Blue green algae
 (4) Mycoplasma

130. Arrange the following elements in descending order of their contribution to percentage weight of the human body.

- (a) Oxygen (b) Carbon
 (c) Hydrogen (d) Nitrogen

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

- (1) (b), (a), (c), (d)
 (2) (a), (b), (c), (d)
 (3) (c), (a), (b), (d)
 (4) (b), (c), (d), (a)

131. Which one of the following statements is **incorrect** ?

- (1) β -cells of pancreas secrete insulin
 (2) α -cells of pancreas secrete glucagon
 (3) α -cells of pancreas secrete insulin
 (4) Glucagon stimulates glycogenolysis

132. Which of the following are characteristic features of Solanaceae family ?

- (a) Flowers are bisexual and actinomorphic ✓
 (b) Calyx have five sepals and are united ✓
 (c) Androecium have five stamens and are epipetalous ✓
 (d) Ovary is inferior ✗

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

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

133. Given below are two statements :

Statement I : When any plane passing through the central axis of the body divides the organism into two identical halves, it is called radial symmetry ✓

Statement II : In phylum Echinodermata, both adults and larvae are radially symmetrical. ✗

In the light of the above statements, choose the **most appropriate** answer from the options given below :

- (1) **Statement I** is incorrect but **Statement II** is correct ✗
 (2) Both **Statement I** and **Statement II** are correct ✓
 (3) Both **Statement I** and **Statement II** are incorrect ✗
 (4) **Statement I** is correct but **Statement II** is incorrect ✓

134. The correct sequence of adult cell cycle phases is _____.

- (1) S-M-G2-G1 (2) G1-G2-S-M ✗
 (3) G1-M-G2-S ✓ (4) G1-S-G2-M ✗

135. In frogs, the number of pairs of cranial nerves arising from the brain are _____.

- (1) 12 ✗ (2) 6 ✗
 (3) 9 ✓ (4) 10 ✗

136. Given below are two statements : one is labelled as **Assertion A** and the other is labelled as **Reason R**.

Assertion A : In recombinant DNA technology, lysozyme is used for disrupting bacterial cells while cellulase is for plant cells. ✓

Reason R : Isolation of genetic material needs disruption of cells. ✓

In the light of the above statements, choose the **most appropriate** answer from the options given below :

- (1) **A** is not correct but **R** is correct ✗
 (2) Both **A** and **R** are correct and **R** is the correct explanation of **A** ✓
 (3) Both **A** and **R** are correct but **R** is not the correct explanation of **A** ✗
 (4) **A** is correct but **R** is not correct ✗

137. The method of directly of injecting a sperm into ovum in assisted reproductive technology is called :

- (1) Embryo transfer (ET) ✗
 (2) Gamete intra fallopian transfer (GIFT) ✗
 (3) Zygote intra fallopian transfer (ZIFT) ✓
 (4) Intra cytoplasmic sperm injection (ICSI) ✗

138. Adaptive radiation in placental mammals and Australian Marsupials leading to similarity between distant species is an example of _____.

- (1) genetic drift ✗
 (2) divergent evolution ✓
 (3) convergent evolution ✗
 (4) founder effect ✗

139. Given below are two statements : one is labelled as **Assertion A** and the other is labelled as **Reason R**.

Assertion A : In an experiment, Mendel observed that the F₁ progeny plants are all tall and none are dwarf.

Reason R : Stem height is a contrasting trait, with tall being dominant and dwarf being recessive.

In the light of the above statements, choose the **most appropriate** answer from the options given below :

- XII
2
- (1) **A** is not correct but **R** is correct
 - (2) Both **A** and **R** are correct and **R** is the correct explanation of **A**
 - (3) Both **A** and **R** are correct but **R** is not the correct explanation of **A**
 - (4) **A** is correct but **R** is not correct

140. Arrange the following in descending order of number of species in the Amazonian rain forest.

- XII
- (a) Plants
 - (b) Birds
 - (c) Fishes
 - (d) Invertebrates
 - (e) Mammals

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

- 3
- (1) (b) > (a) > (d) > (c) > (e)
 - (2) (c) > (b) > (d) > (e) > (a)
 - (3) (d) > (a) > (c) > (b) > (e)
 - (4) (e) > (b) > (a) > (c) > (d)

141. Sponges exchange O₂ with CO₂ by _____.

- XI
2
- (1) gills
 - (2) simple diffusion over their entire body surfaces
 - (3) moist cuticle
 - (4) tracheal tubes

142. For a person with blood group 'O', which of the following is **not** a possible combination of parents' blood group genotypes ?

- XI
1
- (1) Father : $I^A I^B$ and Mother : $I^i I^i$
 - (2) Father : $I^A I^i$ and Mother : $I^B I^i$
 - (3) Father : $I^A I^i$ and Mother : $I^A I^i$
 - (4) Father : $I^B I^i$ and Mother : $I^B I^i$

143. Given below are two statements :

Statement I : Modern *Homo sapiens* arose in Australia and moved across continents. ✗

Statement II : *Homo sapiens* arose around 75000 to 100000 years ago.

In the light of the above statements, choose the **most appropriate** answer from the options given below :

- XII
3
- (1) **Statement I** is incorrect but **Statement II** is correct
 - (2) Both **Statement I** and **Statement II** are correct
 - (3) Both **Statement I** and **Statement II** are incorrect
 - (4) **Statement I** is correct but **Statement II** is incorrect

144. Which of the following is used as an effective sedative and painkiller for treating post-surgery patients ?

- XII
4
- (1) Anti-retroviral drugs
 - (2) Interferon
 - (3) Antibiotics
 - (4) Morphine

145. Which of the following plant produces non-albuminous seeds ?

- XI
1
- (1) Pea
 - (2) Wheat
 - (3) Maize
 - (4) Barley

146. Given below are two statements : one is labelled as **Assertion A** and the other is labelled as **Reason R**.

Assertion A : Abingdon tortoise in Galapagos islands became extinct within a decade after goats were introduced.

Reason R : Goats were more efficient at browsing than Abingdon tortoise.

In the light of the above statements, choose the **most appropriate** answer from the options given below :

- XII
2
- (1) **A** is not correct but **R** is correct
 - (2) Both **A** and **R** are correct and **R** is the correct explanation of **A**
 - (3) Both **A** and **R** are correct but **R** is not the correct explanation of **A**
 - (4) **A** is correct but **R** is not correct

147. The covering of ovum at ovulation is _____.

- XII
4
(1) chorion X
(2) endometrium X
(3) zona radiata X
(4) zona pellucida

148. Which of the following is used as a clot buster ?

- XII
2
(1) Statins
(2) Streptokinase
(3) Penicillin
(4) Cyclosporin A

149. Which of the following structure is **not** a part of the male reproductive system ?

- XII
1
(1) Infundibulum
(2) Rete testis ✓
(3) Epididymis ✓
(4) Vasa efferentia ✓

150. Given below are two statements :

Statement I : Ovulation is caused by LH surge leading to rupture of Graafian follicles.

Statement II : Graafian follicle remaining after ovulation transform into corpus luteum and secretes large amount of estrogen. X progesterone

In the light of the above statements, choose the **most appropriate** answer from the options given below :

- XII
4
(1) **Statement I** is incorrect but **Statement II** is correct
(2) Both **Statement I** and **Statement II** are correct
(3) Both **Statement I** and **Statement II** are incorrect
(4) **Statement I** is correct but **Statement II** is incorrect

151. The opening between the right atrium and the right ventricle is guarded by _____.

- XII
3
(1) sino-atrial node
(2) bicuspid valve
(3) tricuspid valve
(4) semilunar valve

152. Which of the following is **not** evidence for evolution ?

- LD RE
(1) Divergent evolution of anatomical structures such as forelimbs ✓
(2) Convergent evolution of traits like wings of birds and butterflies ✓
(3) Paleontological evidence from fossil records ✓
(4) Embryological support for evolution as proposed by Ernst Haeckel X

153. The inactive form of Bt toxin is converted to the active form in the insect gut _____.

- XII
(2)
(1) by nucleases
(2) due to alkaline pH
(3) due to acidic pH
(4) by proteases

154. Colostrum, secreted by mother during initial days of lactation, is abundant in _____.

- XII
4
(1) IgD
(2) IgG
(3) IgM
(4) IgA

155. Which of the following in female gametophyte of an angiosperm helps in guiding the pollen tube for fertilizing the eggs ?

- XII
3
(1) Polar nucleus
(2) Antipodals
(3) Synergids
(4) Central cells

156. Which of the following disease is **not** sexually transmitted ?

- XII
3
(1) Genital warts
(2) Syphilis
(3) Tuberculosis
(4) Gonorrhoea

157. Which of the following statements about lac-operon is **correct** ?

- XII
2
(1) Galactose can act as an inducer of lac operon X
(2) Gene *i* is constitutively expressed ✓
(3) Lactose activates repressor to bind to the operator X
(4) Genes *i*, *z*, *y* and *a* share single common promoter X

158. Match List-I with List-II.

List-I

List-II

- | | |
|-------------------|-----------------------------------|
| A. Transformation | I. Restriction enzyme |
| B. Cloning site | II. Transfer DNA to host bacteria |
| C. Selection | III. Replication |
| D. Ori | IV. Antibiotic |

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

- (1) A-IV, B-I, C-III, D-II ✗
 (2) A-II, B-I, C-IV, D-III ✓
 (3) A-I, B-II, C-IV, D-III ✗
 (4) A-III, B-IV, C-II, D-I ✗

159. A population of diploid organisms is at Hardy-Weinberg equilibrium. If the frequency of allele **A** is 0.1, the frequency of **AA** is _____.

- (1) 0.99 ✗
 (2) 0.01 ✓
 (3) 0.02 ✗
 (4) 0.10 ✗

160. Sperm motility is due to _____.

- (1) muscular movement ✗
 (2) flagellar movement ✓
 (3) ciliary movement ✗
 (4) amoeboid movement ✗

161. Consider a population of 10 million cells. Given the per-capita birth rate of 0.002 (per unit time) and the per-capita death rate of 0.002 (per unit time), the expected number of cells after 10 generations is _____.

- (1) 100 million ✗
 (2) 1 million ✓
 (3) 5 million ✗
 (4) 10 million ✗

162. Given below are two statements : one is labelled as **Assertion A** and the other is labelled as **Reason R**.

Assertion A : Forelimbs of human and bats are homologous. ✓

Reason R : Forelimbs of humans and bats have similar anatomical structure. ✓

In the light of the above statements, choose the **most appropriate** answer from the options given below :

- (1) **A** is false but **R** is true ✗
 (2) Both **A** and **R** are correct and **R** is the correct explanation of **A** ✓
 (3) Both **A** and **R** are true, but **R** is not the correct explanation of **A** ✗
 (4) **A** is true but **R** is false ✗

163. Muscle contraction is initiated by a signal sent by the central nervous system by the release of _____.

- (1) cyclic adenine monophosphate ✗
 (2) acetyl choline ✓
 (3) acetyl coenzyme A ✗
 (4) cyclic guanine monophosphate ✗

164. Which of the following hormone is **not** secreted by human placenta ?

- (1) LH ✓
 (2) hCG ✗
 (3) Estrogen ✗
 (4) Progesterone ✗

165. Which of the following statements is **correct** about *Plasmodium* ?

- (1) Fertilization takes place in mosquito gut ✓
 (2) Reproduces sexually in liver cells ✗
 (3) Reproduces sexually in RBCs ✗
 (4) Gametocytes develop in mosquito gut ✗

166. Which of the following are **primary** consumers in a food chain ?

- (1) Carnivores ✗
 (2) Parasites ✗
 (3) Predators ✗
 (4) Herbivores ✓

167. Which of the following statements about the reabsorption process in Henle's loop are **correct** ?

- (a) The descending limb of Henle's loop is permeable to water but almost impermeable to electrolytes. ✓
 (b) Urine gets concentrated in Henle's loop. ✓
 (c) Reabsorption of Na^+ and water takes place in Henle's loop. ✓
 (d) Active or passive transport of electrolytes occurs in the ascending limb of Henle's loop. ✓

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

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

168. Given below are two statements : one is labelled as **Assertion A** and the other is labelled as **Reason R**.

Assertion A : The logistic growth model of populations is considered more realistic than the exponential growth model. ✓

Reason R : Resources are finite. ✓

In the light of the above statements, choose the **most appropriate** answer from the options given below :

- (1) ~~A~~ is not correct but **R** is correct ✓
 (2) Both **A** and **R** are correct and **R** is the correct explanation of **A** ✓
 (3) Both **A** and **R** are correct but **R** is not the correct explanation of **A** ✓
 (4) **A** is correct but **R** is not correct ✓

169. Which of the following is the **correct** order of arrangement of vertebrate column from the head to toe ?

- (1) Cervical vertebra, thoracic vertebra, lumbar vertebra, sacrum ✓
 (2) Cervical vertebra, thoracic vertebra, sacrum, lumbar vertebra ✓
 (3) Sacrum, lumbar vertebra, thoracic vertebra, cervical vertebra ✓
 (4) Cervical vertebra, lumbar vertebra, thoracic vertebra, sacrum ✓

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

List-I

List-II

- A. Both species are harmed. III
 B. One species is harmed and the other is benefited I
 C. Both species are benefited II
 D. One is benefited while the other has no effect IV

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

- (1) A-III, B-I, C-II, D-IV ✓
 (2) A-III, B-IV, C-II, D-I ✓
 (3) A-I, B-II, C-III, D-IV ✓
 (4) A-II, B-I, C-IV, D-III ✓

171. If the diploid chromosome number of typical angiosperm is 36, what would be the chromosome number in its endosperm ?

- (1) 72 ✓
 (2) 18 ✓
 (3) 36 ✓
 (4) 54 ✓

$$2n = 36 \quad 16$$

$$3n \Rightarrow 12 \times 3 = 36$$

54

172. Which of the following enzymes synthesizes precursor mRNA ?

- (1) DNA polymerase ✓
 (2) RNA polymerase I ✓
 (3) RNA polymerase II ✓
 (4) RNA polymerase III ✓

173. Given below are two statements :

Statement I :

Plasmids are autonomously replicating DNA. ✓

Statement II :

Plasmids are extrachromosomal DNA. ✓

In the light of the above statements, choose the **most appropriate** answer from the options given below :

- (1) **Statement I** is incorrect but **Statement II** is correct ✓
 (2) Both **Statement I** and **Statement II** are correct ✓
 (3) Both **Statement I** and **Statement II** are incorrect ✓
 (4) **Statement I** is correct but **Statement II** is incorrect ✓

174. How many theca are present in each lobe of a typical bilobed angiosperm anther ?

- (1) 12
(2) 2
(3) 6
(4) 8

1 → 2 theca

175. Natural selection can lead to

- (a) stabilisation ✓
(b) genetic drift ✗
(c) directional change ✓
(d) disruption ✓

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

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

176. Which of the following statements are **correct** ?

- (a) Energy flow from producers to consumers is unidirectional ✓
(b) Energy pyramid can never be inverted ✓
(c) Transfer of energy follows the 1% law ✗ 10%.

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

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

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

List-I

List-II

- | | |
|--------------------------|---|
| A. Excess growth hormone | I. Reabsorption of water and electrolytes in kidney |
| B. Luteinizing hormone | II. Contraction of uterus during child birth |
| C. Vasopressin | III. Acromegaly |
| D. Oxytocin | IV. Ovulation |

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

- (1) A-IV, B-III, C-I, D-II
(2) A-III, B-IV, C-II, D-I
(3) A-III, B-IV, C-I, D-II ✓
(4) A-II, B-IV, C-I, D-III

178. Which of the following are secondary lymphoid organs ?

- (a) Bone marrow ✗
(b) Tonsils
(c) Spleen
(d) Thymus ✗

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

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

179. During PCR, primers bind to the DNA strands in the _____ step.

- (1) ligation
(2) denaturation
(3) extension
(4) annealing ✓

180. Given below are two statements :

Statement I : Down's syndrome is caused by the absence of one of the X-chromosomes. ✗

Statement II : Turner's syndrome is caused by the presence of an additional copy of the chromosomes. ✓

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

- (1) **Statement I** is incorrect but **Statement II** is correct
(2) Both **Statement I** and **Statement II** are correct
(3) Both **Statement I** and **Statement II** are incorrect ✓
(4) **Statement I** is correct but **Statement II** is incorrect