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NEET: 2024 (SOLUTION)

Time: 90 Minutes. **Version T2 (English)** **Max. Marks: 360**

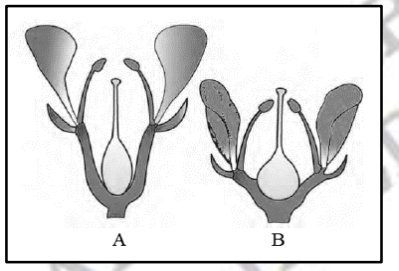
Note:

* Every correct answer (+4 Mark)
* Every wrong answer (-1 Mark)
* Not attempted question (0 Mark)

101. The lactose present in the growth medium of bacteria is transported to the cell by the action of:

1) **Permease** 2) Polymerase
3) Beta- galactosidase 4) Acetylase

102. Identify the type of flowers based on the position of calyx, corolla and androecium with respect to the ovary from the given figures (a) and (b).



1) (a) Perigynous; (b) Epigynous **2) (a) Perigynous; (b) Perigynous**
3) (a) Epigynous; (b) Hypogynous 4) (a) Hypogynous; (b) Epigynous

103. The type of conservation in which the threatened species are taken out from their natural habitat and placed in special setting where they can be protected and given special care is called;

1) Semi- conservation method 2) Sustainable development
3) in-situ conservation 4) **Biodiversity conservation**

104. Formation of inter fascicular cambium from fully developed parenchyma cells is an example for

1) Dedifferentiation 2) Maturation
3) Differentiation 4) Redifferentiation

105. Which of the following is an example of actinomorphic flower?

1) *Pisum* 2) *Sesbania*
3) *Datura* 4) *Cassia*

106. Hind II always cuts DNA molecules at a particular point called recognition sequence and it consists of:

1) 4 bp
2) 10 bp
3) 8 bp
4) 6 bp

107. Which of the following are required for the dark reaction of photosynthesis?

A. Light
B. Chlorophyll
C. CO_2
D. ATP
E. NADPH

Choose the correct answer from the options given below:

1) C, D and E only
2) D and E only
3) A, B and C only
4) B, C and D only

108. Match the Columns:

	List I		**List II**
A.	*Rhizopus*	I.	Mushroom
B.	*Ustilago*	II.	Smut fungus
C.	*Puccinia*	III.	Bread mould
D.	*Agaricus*	IV	Rust fungus

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

109. Lecithin, a small molecular weight organic compound found in living tissues, is an example of.

1) Glycerides
2) Carbohydrates
3) Amino acids
4) Phospholipids

110. The capacity to generate a whole plant from any cell of the plant is called?

1) Differentiation
2) Somatic hybridization
3) Totipotency
4) Micropropagation

111. Read the following statements and select the correct option.

Statement I: Chromosomes becomes gradually visible under light microscope during leptotene stage.

Statement II: The beginning of diplotene stage is recognized by dissolution of synaptonemal complex.

1) Statement I is true but Statement II is false
2) Statement I is false but Statement II is true.
3) Both Statement I and Statement II are true
4) Both Statement I and statement II are false

112. How many molecules of ATP and NADPH are required for every molecule of CO_2 fixed in the Calvin cycle?

1) 3 molecules of ATP and e molecules of NADPH
2) 3 molecules of ATP and 2 molecules of NADPH
3) 2 molecules of ATP and 3 molecules of NADPH
4) 2 molecules of ATP and 2 molecules of NADPH

Note: There can be controversy in this question and answer can be 4

113. Match List I with List II

	List I		List II
A.	Two or more alternative forms of a gene	I.	Back cross
B.	Cross of F_1 progeny with homozygous recessive parent	II.	Ploidy
C.	Cross of F_1 progeny with any of the parents	III.	Allele
D.	Number of chromosome sets in plant	IV	Test cross

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

114. List of endangered species was released by

1) FOAM
2) IUCN
3) GEAC
4) WWF

115. The equation of Verhulst-Pear logistic growth is $\frac{dN}{dt} = rN\left[\frac{K-N}{K}\right]$

From this equation, K Indicates

1) Carrying capacity
2) Population density
3) Intrinsic rate of natural increase
4) Biotic potential

116. Identify the set of correct statements.

A) The flowers of *Vallisneria* are colourful and produce nectar
B) The flowers of waterlily are not pollinated by water
C) In most of water-pollinated species, the pollen grains are protected from wetting.
D) Pollen grains of some hydrophytes are long and ribbon like.
E) In some hydrophytes, the pollen grains are carried passively inside water.

Choose the correct answer from the options given below.

1) A, C, D, and E only
2) B, C, D and E only
3) C, D and E only
4) A, B, C and D only

117. Bulliform cells are responsible for
1) Increased photosynthesis in monocots
2) Providing large spaces for storage of sugars.
3) Inward curling of leaves in monocots
4) Protecting the plant from salt stress.

118. Which one of the following can be explained on the basis of Mendel's Law of Dominance?
A. Out of one pair of factors one is dominant and the other is recessive.
B. Alleles do not show any expression and both the characters appear as such in F_2 generation.
C. Factors occur in pairs in normal diploid plants.
D. The discrete unit controlling a particular character is called factor.
E. The expression of only one of the parental characters is found in a monohybrid cross.

Choose the correct answer from the options given below.
1) B, C and D only
2) A, B, C, D and E
3) A, B and C only
4) A, C, D and E only

119. The cofactor of the enzyme carboxypeptidase is:
1) Flavin
2) Haem
3) Zinc
4) Niacin

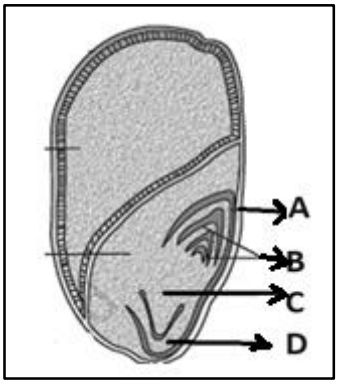
120. Which one of the following is not a criterion for classification of fungi?
1) Mode of spore formation
2) Fruiting body
3) Morphology of mycelium
4) Mode of nutrition

121. Match List I with List II

	List I		**List II**
A.	Nucleolus	I.	Site of formation of glycolipid
B.	Centriole	II.	Organization like the cartwheel
C.	Leucoplasts	III.	Site for active ribosomal RNA synthesis
D.	Golgi apparatus	IV	For storing nutrients

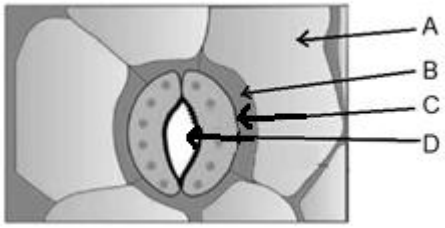
Choose the correct answer from the options given below.
1) A – III, B – IV, C – II, D - I
2) A – I, B – II, C – III, D - IV
3) A – III, B – II, C – IV, D – I
4) A – II, B – III, C – I, D - IV

122. Identify the part of the seed from the given figures which is destined to form root when the seed germinates.



1) C 2) D
3) A 4) B

123. In the given figures, which component has thin outer walls and highly thickened inner walls?



1) A 2) B
3) C 4) D

124. A transcription unit in DNA is defined primarily by the three regions in DNA and these are with respect to upstream and down stream end.

1) Inducer, Repressor, Structural gene
2) Promotor, Structural gene, Terminator
3) Repressor, Operator gene, Structural gene
4) Structural gene, Tansposons, Operator gene

125. Given below are two statements'

Statement I: Parenchyma is living but collenchyma is dead tissue.

Statement II: Gymnosperms lack xylem vessels but presence of xylem vessels is the characteristic of angiosperms.

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

1) Statement I is true but Statement II is false
2) Statement I is false but Statement II is true.
3) Both Statement I and Statement II are true
4) Both Statement I and statement II are false

126. A pink flowered Snapdragon plant was crossed with a red flowered Snapdragon plant. What type of phenotype/s is/are expected in the progeny?
    1) Only pink flowered plants
    2) Red, pink as well as white flowered plants
    3) Only red flowered plants
    4) Red flowered as well as pink flowered plants.

127. Inhibition of Succinic dehydrogenase enzyme by malonate is a classical example of
    1) Competitive inhibition
    2) Enzyme activation
    3) Cofactor inhibition
    4) Feedback inhibition

128. Match List I with List II

	List I		**List II**
A.	*Clostridium butylicum*	I.	Ethanol
B.	*Saccharomyces cerevisiae*	II.	Streptokinase
C.	*Trichoderma polysporum*	III.	Butyric acid
D.	*Streptococcus sp.*	IV	Cyclosporin A

Choose the correct answer from the options given below.
    1) A – III, B – I, C – IV, D - II
    2) A – IV, B – I, C – III, D - II
    3) A – III, B – I, C – II, D – IV
    4) A – II, B – IV, C – III, D - I

129. Spindle fibers attach to kinetochores of chromosomes during
    1) Anaphase
    2) Telophase
    3) Prophase
    4) Metaphase

130. Auxin is used by gardeners to prepare weed-free lawns, But no damage is caused to grass as auxin.
    1) does not affect mature monocotyledonous plants
    2) can help in cell division in grasses, to produce growth
    3) promotes apical dominance
    4) promotes abscission of mature leaves only

131. Topical regions show greatest level of species richness because

A. Tropical latitudes have remained relatively undisturbed for millions of years, hence more time was available for species diversification.

B. Tropical environments are more seasonal.

C. More solar energy is available in tropics.

D. Constant environments promote niche specialization

E. Tropical environments are constant and predictable.

Choose the correct answer from the options given below.

1) A, B and E only
2) A, B and D only
3) A, C, D and E only
4) A and B only

132. Given below are two statements :

Statement I : Bt toxins are insect group specific and coded by a gene *cry* lAc.

Statement II : Bt toxins exists as inactive protoxin in B. *thuringiensis*. However, after ingestion by the insect the inactive protoxin gets converted in to active form due to acidic pH of the insect gut.

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

1) Statement I is true but Statement II is false.
2) Statement I is false but Statement II is true
3) Both Statement I and Statement II are true
4) Both Statement I and statement II are false

133. What is the fate of piece of DNA carrying only gene of interest which is transferred into an alien organism ?

A. The piece of DNA would be able to multiply inself independently in the progeny cells of the organism.

B. It may get integrated into the genome of the recipient.

C. It may multiply and be inherited along with the host DNA.

D. The alien piece of DNA is not an integral part of chromosome.

D. It shows ability to replicate.

Choose the correct answer from the options given below :

1) B and C only
2) A and E only
3) A and B only
4) D and E only

134. These are regarded as major causes of biodiversity loos.

A. Over exploitation
B. Co-extinction
C. Mutation
D. Habitat loss and fragmentation
E. Migration

Choose the correct option

1) A, B and E only
2) A. B and D only
3) A, C and D only
4) A, B, C and D only

135. In a plant, black seed color (BB/Bb) is dominant over white seed color (bb). In order to find out the genotype of the black seed plant, with which of the following genotype will you cross it?

1) Bb
2) BB/Bb
3) BB
4) bb

136. Read the following statements and choose the set of correct statements:

In the members of Phaeophyceae.

A. Asexual reproduction occurs usually by biflagellate zoospores.
B. Sexual reproduction is by oogamous method only.
C. Stored food is in the form of carbohydrates which is either mannitol or laminarin.
D. The major pigments found are chlorophyll a, c and carotenoids and xanthophyll.
E. Vegetative cell have cellulosic wall, usually covered on the outside by gelatinous coating of align.

Choose the correct answer from the options given below:

1) A, C, D and E only
2) A, B, C and E only
3) A, B, C and D only
4) B, C, D and E only

137. Match List I with List II

	List I (Types of Stamens)		**List II (Example)**
A.	Monoadelphous	I.	Citrus
B.	Diadelphous	II.	Pea
C.	Polyadelphous	III.	Lily
D.	Epiphyllous	IV	China-rose

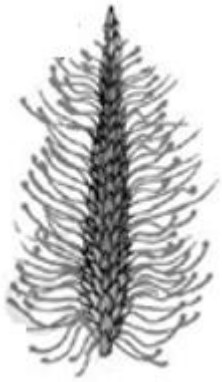
Choose the correct answer from the questions given below

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

138. Spraying sugarcane crop with which of the following plant growth regulators, increases the length of stem, thus, increasing the yield?

1) Cytokinin
2) Abscisic acid
3) Auxin
4) Gibberellin

139. Identify the correct description about the figure



1) Cleistogamous flowers showing autogamy
2) Compact inflorescence showing complete autogamy
3) **Wind pollinated plant inflorescence showing flowers with well exposed stamens.**
4) Water pollinated flowers showing stamens with mucilaginous covering.

140. Which of the following are fused in somatic hybridization involving two varieties of plants?

1) Protoplasts 2) Pollens
3) Callus 4) Somatic embryos

141. Identify the step in tricarboxylic acid cycle, which does not involve oxidation of substrate.

1) Succinyl-CoA → Succinic acid 2) Isocitrate → α - ketoglutaric acid
3) Malic acid → Oxaloacetic acid 4) Succinic acid → Malic acid

142. Match List I with List II

	List I		**List II**
A.	Robert May	I.	Species –Area relationship
B.	Alexander von Humboldt	II.	Long term ecosystem experiment using out door plots
C.	Paul Ehrlich	III.	Global species diversity at about 7 million
D.	David Tilman	IV	Rivet popper hypothesis

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

143. Match List I with List II

	List I		**List II**
A.	Rose	I.	Twisted aestivation
B.	Pea	II.	Perigynous flower
C.	Cotton	III.	Drupe
D.	Mango	IV	Marginal placentation

Choose the correct answer from the questions given below

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

144. Match List I with List II

	List I		List II
A.	GLUT – 4	I.	Hormone
B.	Insulin	II.	Enzyme
C.	Trypsin	III.	Intercellular ground substance
D.	Collagen	IV	Enables glucose transport into cells

Choose the correct answer from the questions given below

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

145. The DNA present in chloroplast is :

1) Linear, single stranded
2) Circular, single stranded
3) Linear, double stranded
4) Circular, double stranded

146. Given below are two statements:

Statement I : In C_3 plants, some O_2 binds to RuBisCO, hence CO_2 fixation is decreased.

Statement II: In C_4 plants, mesophyll cells show very little photorespiration while bundle sheath cells do not show photorespiration.

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

1) Statement I is true but Statement II is false.
2) Statement I is false but Statement II is true
3) Both Statement I and Statement II are true
4) Both Statement I and statement II are false

147. Which of the following statement is correct regarding the process of replication in *E*.coli?

1) The DNA dependent DNA polymerase catalyses polymerization in 5' $\rightarrow$ 3' as well as 3' $\rightarrow$ 5' direction
2) The DNA dependent DNA polymerase catalyses polymerization in 5' $\rightarrow$ 3'direction.
3) The DNA dependent DNA polymerase catalyses polymerization in one direction that is 3' $\rightarrow$ 5'
4) The DNA dependent RNA polymerase catalyses polymerization in one direction that is 5' $\rightarrow$ 3'

148. Match List I with List II

	List I		**List II**
A.	Frederick Griffith	I.	Genetic code
B.	Franscois Jacob & Jacque Monod	II.	Semi-conservative mode of DNA replication
C.	Har Gobind Khorana	III.	Transformation
D.	Meselson Stahl	IV	*Lac* operon

Choose the correct answer from the questions given below

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

149. Match List I with List II

	List I		**List II**
A.	Citric acid cycle	I.	Cytoplasm
B.	Glycolysis	II.	Mitochondrial matrix
C.	Electron transport system	III.	Intermembrane space of mitochondria
D.	Proton gradient	IV	Inner mitochondrial membrane

Choose the correct answer from the questions given below

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

150. In an ecosystem if the Net Primary Productivity (NPP) of first tropic level is 100 x ($kcal$ m^{-2}) yr^{-1}, what would be the GPP (Gross Primary Productivity) of the third trophic level of the same ecosystem?

1) 10 x ($kcal$ m^{-2}) yr^{-1}
2) $\frac{100x}{3x}$ ($kcal$ m^{-2}) yr^{-1}
3) $\frac{x}{10}$ ($kcal$ m^{-2}) yr^{-1}
4) x ($kcal$ m^{-2}) yr^{-1}

151. Match List I with List II

	List I		List II
A.	Fibrous joints	I.	Adjacent vertebrae, limited movement
B.	Cartilaginous	II.	Humerus and Pectoral girdle, rotational movement
C.	Hinge joints	III.	Skull, don't allow any movement
D.	Ball and socked joints	IV	Knee, help in locomotion

Choose the correct answer from the questions given below

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

152. Match List I with List II

	List I		List II
A.	Typhoid	I.	Fungus
B.	Leishmaniasis	II.	Nematode
C.	Ringworm	III.	Protozoa
D.	Filariasis	IV	Bacteria

Choose the correct answer from the questions given below

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

153. In both sexes of cockroach, a pair of joints filmentous structures called anal cerci are present on

1) 8^{th} and 9^{th} segment
2) 11^{th} segment
3) 5^{th} segment
4) 10^{th} segment

154. Which of the following is not a component Fallopian tube?

1) Infundibulum
2) Ampulla
3) Uterine fundus
4) Isthmus

155. Given below are two statements "

Statement I : The presence or absence of hymen is not a reliable indictor of virginity.

Statement II: The hymen is torn during the first coitus only.

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

1**) Statement I is true but Statement II is false.**
2) Statement I is false but Statement II is true
3) Both Statement I and Statement II are true
4) Both Statement I and statement II are false

156. Which of the following are Autoimmune disorders ?

A. Myasthenia gravis
B. Rheumatoid arthritis
C. Muscular dystrophy
E. Systemic Lupus Etythematosus (SLE)

Choose the most appropriate answer from the options given below

1) B, C and E only
2) C, D and E only
3) A, B & D only
4) A, B and E only

157. Match List I with List II

	List I (Sub Phases of Prophase I)		**List II (Specific characters)**
A.	Diakinesis	I.	Synaptonemal complex formation
B.	Pachytene	II.	Completion of terminalisation of chiasmata
C.	Zygotene	III.	Chromosomes look like thin threads
D.	Leptotene	IV	Appearance of recombination nodules

Choose the correct answer from the questions given below

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

158. Given below are some stages of human evolution. Arrange them in correct sequence. (Past to Recent)

A. *Homo habilis*
B. *Homo sapiens*
C. *Homo neanderthalensis*
D. *Homo erectus*

Choose the correct sequence of human evolution from the options given below:

1) C-B-D-A
2) A-D-C-B
3) D-A-C-B
4) B-A-D-C

159. Match List I with List II

	List I		**List II**
A.	Expiratory capacity	I.	Expiratory reverse volume + Tidal volume + Inspiration reverse volume
B.	Functional residual capacity	II.	Tidal volume + Expiratory reverse volume
C.	Vital capacity	III.	Tidal volume + Inspiratory reverse volume
D.	Inspiratory capacity	IV	Expiratory reverse volume + Residual volume

Choose the correct answer from the questions given below

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

160.

	List I		List II
A.	Pons	I.	Provides additional space for Neurons, regulates posture and balance.
B.	Hypothalamus	II.	Controls respiration and gastric secretions.
C.	Medulla	III.	Connects different regions of the brain.
D.	Cerebellum	IV	Neuro secretory cells

Choose the correct answer from the options given below:

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

161. Given below are two statements :

Statement I: In the nepbron, the descending limb of loop of Henle is impermeable to water and permeable to electrolytes.

Statement II: The proximal convoluted tubule is lined by simple columnar brush border epithelium and increases the surface area for reabsorption

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

1) Statement I is true but Statement II is false
2) Statement I is false but Statement II is true
3) Both Statement I and Statement II are true
4) Both Statement I and statement II are false

162. Which of the following is not a steroid hormone?

1) Progesterone
2) **Glucagon**
3) Cortisol
4) Testosterone

163. Match List I with List II :

	List I		List II
A.	*Prerophyllum*	I.	Hag fish
B.	*Myxine*	II.	Saw fish
C.	*Pristis*	III.	Angel fish
D.	*Exocoetus*	IV	Flying fish

Choose the correct answer from the options given below :

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

164. Which one is the correct product of DNA dependent RNA polymerase to the given template?

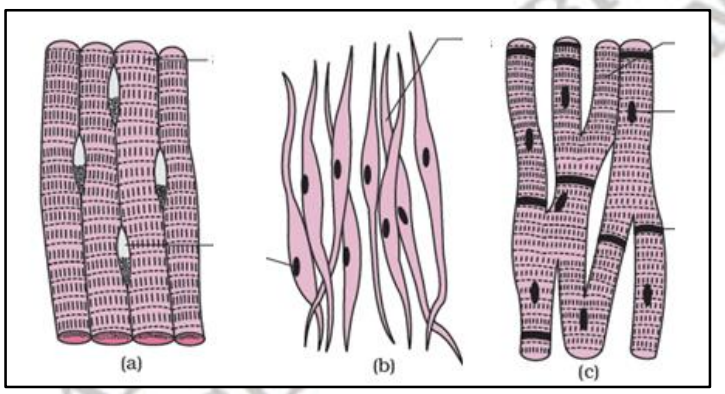
3'TACATGGCAAATATCCATTCA5'

1) 5'AUGUACCGUUUAUAGGGAAGU3'
2) 5'ATGTACCGTTTATAGGTAAGT3'
3) **5'AUGUACCGUUUAUAGGUAAGU3'**
4) 5'AUGUAAAGUUUAGGUAAGU3'

165. Which of the following statements is incorrect?

1) **Bio-reactors are used to produce small scale bacterial cultures.**
2) Bio-reactors have an agitator system, an oxygen delivery system and foam control system.
3) A bio-reactor provides optimal growth conditions for achieving the desired product.
4) Most commonly used bio-reactors are of stirring type.

166. Three types of muscles are given as a, b and c. Identify the correct matching pair along with their location in human body:



Name of muscles/location

1) (a) Skeletal – Biceps, (b) Involuntary – Intestine , (c) Smooth - Heart
2) (a) Involuntary – Nose tip, (b) Skeletal – Bone, (c) Cardiac - Heart
3) (a) Smooth – Toes, (b) Skeletal – Legs, (c) Cardiac - Heart
4) **(a) Skeletal – Triceps, (b) Smooth – Stomach, (c) Cardiac - Heart**

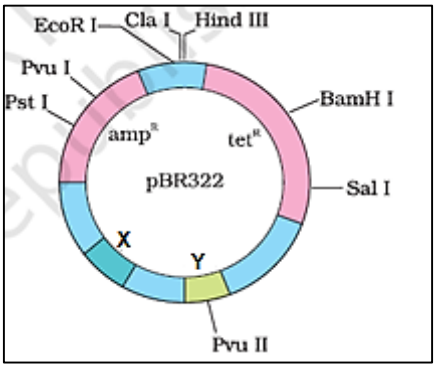
167. Which one of the following factors will not affect the Hardy-Weinberg equilibrium?

1) Gene migration
2) **Constant gene pool**
3) Genetic recombination
4) Genetic drift

168. Which of the following is not a natural/traditional contraceptive method?

1) Lactational amenorrhea
2) **Vaults**
3) Coitus interruptus
4) Periodic abstinence

169. The following diagram showing restriction sites in *E.coli* cloning vector pBR322. Find the role of 'X' and 'Y' genes:



1) The gene 'X' is for protein involved in replication of Plasmid and 'Y' for resistance to antibiotics.
2) Gene 'X' is responsible for recognition sites and 'Y' is responsible for antibiotic resistance.
3) The gene 'X' is responsible for resistance to antibiotics and 'Y' for protein involved in the replication of Plasmid.
4) **The gene 'X' is responsible for controlling the copy number of the linked DNA and 'Y' for protein involved in the replication of Plasmid.**

170. Match List I with List II:

	List I		**List II**
A.	Lipase	I.	Peptide bond
B.	Nuclease	II.	Ester bond
C.	Protease	III.	Glycosidic bond
D.	Amylase	IV	Phosphodiester bond

Choose the correct answer from the options given below :

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

171. Which of the following factors are favourable for the formation of oxyhaemoglobin in alveoli?

1) Low pCO_2 and High H^+ concentration
2) Low pCO_2 and High temperature
3) High pO_2 and High pCO_2
4) High pO_2 and Lesser H^+ concentration

172. Match List I with List II:

	List I		**List II**
A.	Common cold	I.	*Plasmodium*
B.	Haemozoin	II.	Typhoid
C.	Widal test	III.	Rhinoviruses
D.	Allergy	IV	Dust mites

Choose the correct answer from the options given below :

1) A – III, B – I, C – II, D - IV 2) A – IV, B – II, C – III, D - I

3) A – II, B – IV, C – III, D – I 4) A – I, B – III, C – II, D – IV

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

Assertion A : Breast-feeding during initial period of infant growth is recommended by doctors for bringing a healthy baby.

Reason R : Colostrum contains several antibodies absolutely essential to develop resistance for the new born baby.

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

1) A is correct but R is not correct

2) A is not correct but R is correct.

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

4) Both A and R are correct and R is NOT the correct explanation of A

174. Match List I with List II:

	List I		**List II**
A.	Non-medicated IUD	I.	Multiload 375
B.	Copper releasing IUD	II.	Progestogens
C.	Hormone releasing IUD	III.	Lippes loop
D.	Implants	IV	LNG-20

Choose the correct answer from the options given below :

1) A – IV, B – I, C – II, D - III **2) A – III, B – I, C – IV, D - II**

3) A – III, B – I, C – II, D – IV 4) A – I, B – III, C – IV, D – II

175. Following are the stages of cell division :

A. Gap 2 phase B. Cytokinesis

C. Synthesis phase D. Karyokinesis

E. Gap 1 phase

Choose the correct sequence of stages form the options given below :

1) B-D-E-A-C **2) E-C-A-D-B**

3) C-E-D-A-B 4) E-B-D-A-C

176. Match List I with List II:

	List I		**List II**
A.	Pleurobrachia	I.	Mollusca
B.	Radula	II.	Ctenophora
C.	Stomochord	III.	Osteichthyes
D.	Air bladder	IV	Hemichordata

Choose the correct answer from the options given below :

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

177. The flippers of the Penguins and Dolphins are the example of the

1) Convergent evolution
2) Divergent evolution
3) Adaptive radiation
4) Natural selection

178. Match List I with List II:

	List I		**List II**
A.	Axoneme	I.	Centriole
B.	Cartwheel pattern	II.	Cilia and flagella
C.	Crista	III.	Chromosome
D.	Satellite	IV	Mitochondria

Choose the correct answer from the options given below :

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

179. Following are the stages of pathway for conduction of an action potential through the heart:

A. AV bungle
B. Purkinje fibres
C. AV node
D. Bundle branches
E. SA node

Choose the correct sequence of pathway from the options given below :

1) B-D-E-C-A
2) E-A-D-B-C
3) E-C-A-D-B
4) A-E-C-B-D

180. The "Ti plasmid" of *Agrobacterium tumefaciens* stands for

1) **Tumor inducing plasmid**
2) Temperature independent plasmid
3) Tumour inhibiting plasmid
4) Tumor independent plasmid

181. Match List I with List II:

	List I		**List II**
A.	Cocaine	I.	Effective sedative in surgery
B.	Heroin	II.	*Cannabis sativa*
C.	Morphine	III.	*Erythroxylum*
D.	Marijuana	IV	*Papaver somniferum*

Choose the correct answer from the options given below :

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

182. Match List I with List II:

	List I		**List II**
A.	Down's syndrome	I.	11^{th} chromosome
B.	α-Thalassemia	II.	'X' chromosome
C.	β-Thalassemia	III.	21^{st} chromosome
D.	Klinefelter's syndrome	IV	16^{th} chromosome

Choose the correct answer from the options given below :

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

183. Match List I with List II:

	List I		**List II**
A.	α-1antitrypsin	I.	Cotton bollworm
B.	Cry IAb	II.	ADA deficiency
C.	Cry IAc	III.	Emphysema
D.	Enzyme replacement therapy	IV	Corn borer

Choose the correct answer from the options given below :

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

184. Consider the following statements :

A. Annelids are true coelomates
B. Poriferans are pseudocoelomates
C. Aschelminthes are acoelomates
D. Platyhelminthes are pseudocoelomates

Choose the correct answer from the options given below

1) C only
2) D only
3) B only
4) A only

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

Assertion A : FSH acts upon ovarian follicles in female and Leydig cells in male..

Reason R : Growing ovarian follicles secrete estrogen in female while interstitial cells secrete androgen in male human being.

In the light of the above statements, choose the most appropriate 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 and R is **NOT** the correct explanation of A

186. Given below are two statements:

Statement I : Mitochondria and chloroplasts are both double membrane bound organelles.

Statement II : Inner membrane of mitochondria is relatively less permeable, as compared to chloroplast.

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

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

187. Regarding catalytic cycle of an enzyme action, select the correct sequential steps :

A. Substrate enzyme complex formation.
B. Free enzyme ready to bind with another substrate.
C. Release of products.
D. Chemical bonds of the substrate broken.
E. Substrate binding to active site.

Choose the correct answer from the option given below :

1) B. A. C. D. E
2) E, D, C, B, A
3) **E, A, D, C, B**
4) A, E, B, D, C

188. Given below are two statements:

Statement I : Gause's competitive exclusion principle states that two closely related species competing for different resources cannot exist indefinitely.

Statement II : According to Gause's principle, during competition, the inferior will be eliminated. This may be true if resources are limiting.

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

1) Statement I is true but Statement II is false
2) **Statement I is false but Statement II is true**
3) Both Statement I and Statement II are true
4) Both Statement I and Statement II are false

189. Match List I with List II:

	List I		**List II**
A.	Exophthalmic goiter	I.	Excess secretion of cortisol, moon face & hyperglycemia
B.	Acromegaly	II.	Hypo-secretion of thyroid hormone and stunted growth.
C.	Cushing's syndrome	III.	Hype secretion of thyroid hormone & protruding eye balls.
D.	Cretinism	IV	Excessive secretion of growth hormone.

Choose the correct answer from the options given below :

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

190. As per ABO blood grouping system, the blood group of father is B^+, mother is A^+ and child is O^+. their respective genotype can be

A. I^Bi / I^Ai / ii
B. I^BI^B / I^AI^A/ ii
C. I^AI^B / iI^A/ I^Bi
D. I^Ai / I^Bi / I^Ai
D. iI^B / iI^A / I^AI^B

Choose the most appropriate answer from the options given below :*91.*

1) C & B only
2) D & E only
3) A only
4) B only

191. The following are the statements about non-chordates

A. Pharynx is perforated by gill slits
B. Notochord is absent
C. Central nervous system is dorsal
D. Heart is dorsal if present
E. Post anal tail is absent

Choose the most appropriate answer from the options given below:

1) B, D & E only
2) B, C & D only
3) A & C only
4) A, B & D only

192. Match List I with List II

	List I		List II
A.	The structures used for storing of food	I.	Gizzard
B.	Ring of 6 – 8 blind tubules at junction of foregut and midgut	II.	Gastric Caeca
C.	Ring of 100 – 150 yellow coloured thin filaments at junction of midgut and hindgut	III.	Malpighian tubules
D.	The structures used for grinding the food	IV	Crop

Choose the correct answer from the options given below.

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

193. Choose the correct statement given below regarding juxta medullary nephron.

1) Loop of Henle of juxta medullary nephron runs deep into medulla.
2) Juxta medullary nephrons outnumber the cortical nephrons.
3) Juxtra medullary nephrons are located in the columns of Bertini.
4) Renal corpuscle of juxta medullary nephron lies in the outer portion of the renal medulla

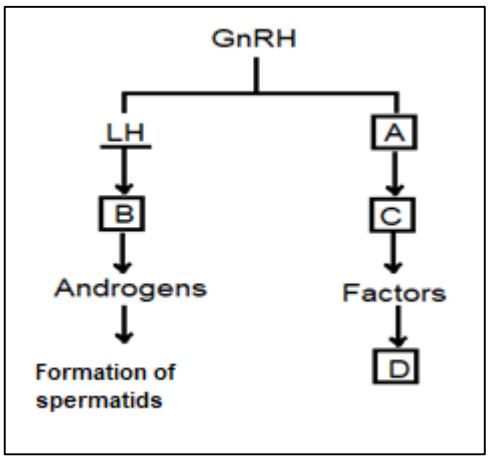
194. Match List I with List II

	List I		List II
A.	P wave	I.	Heart muscles are electrically silent
B.	QRS complex	II.	Depolarisation of ventricles
C.	T wave	III.	Depolarisation of atria
D.	T-P gap	IV	Repolarisation of ventricles

Choose the correct answer from the options given below.

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

195. Identify the correct option (A), (B), (C), (D) with respect to spermatogenesis.



1) FSH, Sertoli cells, Leydig cells, spermatogenesis.
2) ICSH, Leydig cells, Sertoli cells spermatogenesis
3) **FSH, Leydig cells, Sertoli cells** spermiogenesis
4) ICSH, Interstitial cells, Leydig cells, spermiogenesis

196. Match List I with List II

	List I		**List II**
A.	Unicellular glandular epithelium	I.	Salivary glands
B.	Compound epithelium	II.	Pancreas
C.	Multicellular glandular epithelium	III.	Goblet cells of alimentary canal
D.	Endocrine glandular epithelium	IV	Most surface of buccal cavity

Choose the correct answer from the options given below.

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

197. Given below are two statements:

Statement I : The cerebral hemispheres are connected by nerve tract known as corpus callosum.

Statement II: The brain stem consists of the medulla oblongata, pons and cerebrum.

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 incorrect
2) Statement I is incorrect but Statement II is correct
3) Both Statement I and Statement II are correct
4) Both Statement I and statement II are incorrect

198. Match List I with List II

	List I		**List II**
A.	Mesozoic Era	I.	Lower invertebrates
B.	Proterozoic Era	II.	Fish & Amphibia
C.	Cenozoic Era	III.	Birds & Reptiles
D.	Paleozoic Era	IV	Mammals

Choose the correct answer from the options given below.

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

199. Match List I with List II

	List I		**List II**
A.	RNA polymerase III	I.	snRNPs
B.	Termination of transcription	II.	Promotor
C.	Splicing of Exons	III.	Rho factor
D.	TATA box	IV	SnRNAs, tRNA

Choose the correct answer from the options given below.

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

200. Given below are two statements:

Statement I : Bone marrow is the main lymphoid organ where all blood cells including lymphocytes are produced.

Statement II: Both bone marrow and thymus provide micro environments for the development and maturation of T-lymphocytes.

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 incorrect
2) Statement I is incorrect but Statement II is correct
3) Both Statement I and Statement II are correct
4) Both Statement I and statement II are incorrect