



CREATIVE NEET ACADEMY

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NEET (UG)-2024 (Code - Q2)

BOTANY

SECTION: A

101. Inhibition of Succinic dehydrogenase enzyme by malonate is a classic example of

- (1) Cofactor inhibition (2) Feedback inhibition
(3) Competitive inhibition (4) Enzyme activation

Ans: (3)

Page no: I PUC NCERT- 117

102. Given below are two statements

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

Statement II: Bt toxin exists as inactive protoxin in *B. thuringiensis*. However, after ingestion by the insect the inactive protoxin gets converted into 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) Both Statement I and statement II are true
(2) Both statement I and statement II are false
(3) statement I is true but statement II is false
(4) Statement I is false but statement II is true

Ans: (3)

Page no: II PUC NCERT- 108

103. Match List I with List II.

List I

- A. *Rhizopus*
B. *Ustilago*
C. *Puccinia*
D. *Agaricus*

List II

- I. Mushroom
II. Smut fungus
III. Bread mould
IV. Rust fungus

Choose the correct answer from the options given below.

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

Ans: (1)

Page no: I PUC NCERT- 17, 18

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

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

Ans: (1)

Page no: II PUC NCERT- 178

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

From this equation, K indicates

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



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Ans: (3)

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106. 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) C, D and E only
- (2) A, B, C and D only
- (3) A, C, D and E only
- (4) B, C, D and E only

Ans: (4)

Page no: II PUC NCERT- 13

107. Match List I with List II.

List I

- A. Two or more alternative forms of a gene
- B. Cross of F_1 progeny with homozygous recessive any parent
- C. Cross of F_1 progeny with any of the parents
- D. Number of chromosomes sets in plant

List II

- I. Back cross
- II. Ploidy
- III. Allele
- IV. Test cross

Choose the correct answer from the options given below

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

Ans: (3)

Page no: II PUC NCERT- 56, 58, 75

108. 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 red flowered plants
- (2) Red flowered as well as pink flowered plants
- (3) Only pink flowered plants
- (4) Red, pink as well as white flowered plants

Ans: (2)

Page no: II PUC NCERT- 60

109. Given below are two statements

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

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

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



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

Ans: (1)

Page no: I PUC NCERT- 126

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

- (1) Beta – galactosidase
- (2) Acetylase
- (3) Permease
- (4) Polymerase

Ans: (3)

Page no: II PUC NCERT- 101

111. These are regarded as major causes of biodiversity loss

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

Choose the correct option.

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

Ans: (4)

Page no: II PUC NCERT- 222, 223

112. Bulliform cells are responsible for

- (1) Inward curling of leaves in monocots
- (2) Protecting the plant from salt stress
- (3) Increased photosynthesis in monocots
- (4) Providing large spaces for storage of sugars

Ans: (1)

Page no: I PUC NCERT- 77

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

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

Ans: (1)

Page no: I PUC NCERT- 62

114. In a plant, black seed colour (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
- (3) Bb
- (4) BB/ Bb

Ans: (2)

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115. 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 character 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 monohybrid cross.

choose the correct answer from the options given below

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

Ans: (2)

Page no: II PUC NCERT- 59

116. Formation of interfascicular cambium from fully developed parenchyma cells is an example for

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

Ans: (3)

Page no: I PUC NCERT- 172

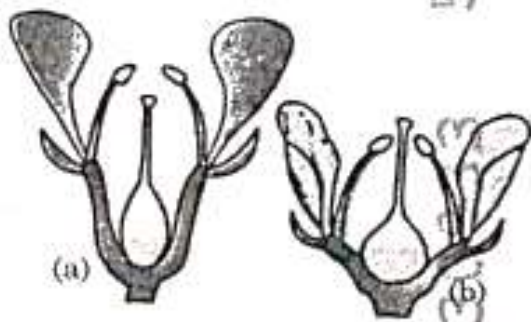
117. The type of conservation in which the threatened species are taken out from their natural habitat and placed in special setting where they can be protected and given special care is called.

- (1) In – situ conservation
- (2) Biodiversity conservation
- (3) Semi – conservative method
- (4) Sustainable development

Ans: (2)

Page no: II PUC NCERT- 225

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



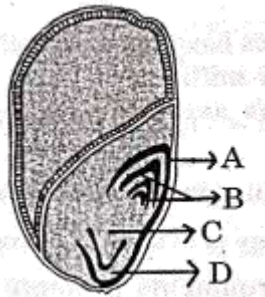
- (1) (a) Epigynous; (b) Hypogynous
- (2) (a) Hypogynous; (b) Epigynous
- (3) (a) Perigynous; (b) Epigynous
- (4) (a) Perigynous; (b) Perigynous

Ans: (4)

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



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

Ans: (3)

Page no: I PUC NCERT- 67

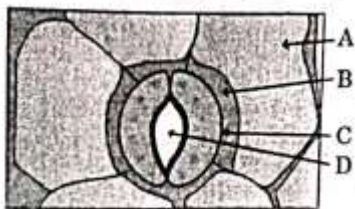
120. Auxin is used by gardeners to prepare weed- free lawns. But no damage is caused to grass as auxin

- (1) Promotes apical dominance.
(2) Promotes abscission of mature leaves only.
(3) Does not affect mature monocotyledonous plants.
(4) Can help in cell division in grasses, to produce growth.

Ans: (3)

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



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

Ans: (1)

Page no: I PUC NCERT- 72

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

- (1) 2 molecules of ATP and 3 molecules of NADPH
(2) 2 molecules of ATP and 2 molecules of NADPH
(3) 3 molecules of ATP and 3 molecules of NADPH
(4) 3 molecules of ATP and 2 molecules of NADPH

Ans: (4)

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123. Tropical regions show greatest level of species richness because

- A. Tropical latitudes 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 predicatble.

Choose the correct answer from the options given below.

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

Ans: (1)

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124. The cofactor of the enzyme carboxypeptidase is

- (1) Zinc
- (2) Niacin
- (3) Flavin
- (4) Haem

Ans: (1)

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

- A. Light
- B. Chlorophyll
- C. CO₂
- D. ATP
- E. NADPH

Choose the correct answer from the options given below.

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

Ans: (3)

Page no: I PUC NCERT- 215

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

- (1) Repressor, Operator gene, Structural gene
- (2) Structural gene, Transposons, Operator gene
- (3) Inducer, Repressor, Structural gene
- (4) Promotor, Structural gene, Terminator

Ans: (4)

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127. Match List I with List II

List I

- A. *Clostridium*
- B. *Saccharomyces*
- C. *Trichoderma polysporum*
- D. *Streptococcus* sp.

List II

- I. Ethanol
- II. Streptokinase
- III. Butyric acid
- IV. Cyclosporin – A

choose the correct answer from the options given below.

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

Ans: (3)

Page no: II PUC NCERT- 150

128. Match List I with List II.

List I

- A. Nucleolus
- B. Centriole
- C. Leucoplasts
- D. Golgi apparatus

List II

- I. site of formation of glycolipid
- II. organization like the cartwheel
- III. Site for active ribosomal RNA synthesis
- IV. For storing nutrients

choose the correct answer from the options given below.

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

Ans: (1)

Page no: I PUC NCERT- 133, 134, 136, 138

129. What is the fate of a 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 itself 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.
- E. It shows ability to replicate.

choose the correct answer from the options given below.

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

Ans: (3)

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130. Spindle fibres attach to kinetochores of chromosomes during

- (1) Prophase
- (2) Metaphase
- (3) Anaphase
- (4) Telophase

Ans: (2)

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

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

Ans: (2)

Page no: I PUC NCERT- 144

132. Hind II always cuts DNA molecules at a particular point called recognition sequence and it consist of

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

Ans: (2)

Page no: II PUC NCERT- 165

133. 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 above statements, choose the correct answer from the options given below.

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

Ans: (4)

Page no: I PUC (OLD) NCERT- 87

134. List of endangered species was released by

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

Ans: (4)

Page no: II PUC NCERT- 217

135. Which one of the following is not a criterion for classification of fungi?

- (1) Morphology of mycelium (2) Mode of nutrition
(3) Mode of spore formation (4) Fruiting body

Ans: (2)

Page no: I PUC NCERT- 17

SECTION: B

136. The DNA present in chloroplast is

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

Ans: (2)

Page no: I PUC NCERT- 98

137. Match List I with List II

List I

- A. Citric acid cycle
B. Glycolysis
C. Electron transport system

List II

- I. Cytoplasm
II. Mitochondrial matrix
III. Intermembrane space of mitochondria



D. Proton gradient IV. Inner mitochondrial membrane

choose the correct answer from the options given below.

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

Ans: (2)

Page no: I PUC NCERT- 158, 161

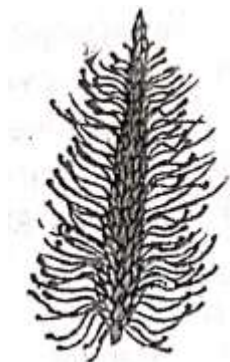
138. Identify the step in tricarboxylic acid cycle, which does not involve oxidation of substrate.

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

Ans: (4)

Page no: I PUC NCERT- 158, 159

139. Identify the correct description about the given figure.



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

Ans: (1)

Page no: II PUC NCERT- 13

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

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

Ans: (2)

Page no: I PUC NCERT- 176

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

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



Ans: (3)

Page no: II PUC NCERT- 207

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

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

Ans: (4)

Page no: II PUC NCERT- 90

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

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

Ans: (3)

Page no: II PUC NCERT- 178

144. 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 options given below.

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

Ans: (1)

Page no: I PUC NCERT- 63, 64, 65, 67

145. Match List I with List II.

- | List I | List II |
|-----------------------------------|---|
| A. Frederick Griffith | I. Genetic code |
| B. Francois Jacob ^& Jacque Monod | II. Semi - conservative mode of DNA replication |
| C. Har Gobind | III. Transformation |
| D. Meselson & Stahl | IV. <i>Lac operon</i> |

choose the correct answer from the options given below.

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

Ans: (2)

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146. Match List I with List II.

List I

- A. GLUT – 4
- B. Insulin
- C. Trypsin
- D. Collagen

List II

- I. Hormone
- II. Enzyme
- III. Intercellular ground substance
- IV. Enables glucose transport into cells.

choose the correct answer from the options given below.

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

Ans: (1)

Page no: I PUC NCERT- 109

147. Match List I with List II.

List I

- A. Robert May
- B. Alexander von Humboldt
- C. Paul Ehrlich
- D. David Tilman

List II

- I. Species – Area relationship
- II. Long term ecosystem experiment using out door plots
- III. Global species diversity at about 7 million
- IV. Rivet popper hypothesis

choose the correct answer from the options given below.

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

Ans: (2)

Page no: II PUC NCERT- 217, 220, 221, 222

148. 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 above statements, choose the correct answer from the options given below.

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

Ans: (3)

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149. Match List I with List II.

List I

(Types of Stamens)

- A. Monadelphous
- B. Diadelphous
- C. Polyadelphous
- D. Epiphyllous

List II

(Example)

- I. Citrus
- II. Pea
- III. Lily
- IV. China – rose

Choose the correct answer from the options given below.

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

Ans: (1)

Page no: I PUC NCERT- 64

150. 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 cells have a cellulosic wall, usually covered on the outside by gelatinous coating of algin.

choose the correct answer from the options given below.

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

Ans: (3)

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