

BIOLOGY QUESTION PAPER

Time : 2 Hrs.

Max. Marks : 40

Q. 1. Select and write the most appropriate answer from the given alternatives in each sub-question : [8]

- (i) Successive Nucleotides of the same strand of DNA are joined by (1)
(a) Hydrogen bonds (b) Nitrogen bonds
(c) Sugars (d) Phosphodiester bonds
- (ii) Ornithophily is effected by (1)
(a) Snails (b) Insects
(c) Bats (d) Birds
- (iii) Gibberellins were first discovered from (1)
(a) Bacteria (b) Fungi
(c) Algae (d) Gymnosperms
- (iv) Plasmolysis occurs in a plant cell when the outer solution is (1)
(a) Isotonic (b) Hypertonic
(c) Hypotonic (d) Mesotonic
- (v) The structures associated with genetic engineering are (1)
(a) Plastids (b) Protoplasm
(c) Plasmids (d) Mitochondria
- (vi) Synergids are (1)
(a) Haploid (b) Triploid
(c) Diploid (d) Tetraploid
- (vii) Growth rate is maximum during (1)
(a) Lag phase (b) Log phase
(c) Senescence phase (d) Growth phase
- (viii) Wilting in plant occurs due to increase in (1)
(a) Photosynthesis (b) Photoperiodism
(c) Transpiration (d) Osmosis

Q. 2 (A) Write a note on Endemism. (2) [8]

OR

Describe the methods of conservation of forests.

(B) Explain blue green algae as a biofertilizer. (2)

OR

Give the medicinal importance of Asparagus racemosus.

(C) Sketch and label male gametophyte in Angiosperms (2)

(D) Give medicinal importance of Azadirachta indica. (2)

Q. 3 (A) Give different measures for conservation of water resources. (2) [8]

(B) Write the practical applications of Gibberellins. (2)

OR

Describe the methods of breaking seed dormancy.

(C) Write a note on Biopatent. (2)

(D) Explain Apoplastic and Symplastic movement of water absorption. (2)

OR

Define Transpiration. Explain its types.

Q. 4 Attempt any TWO of the following : [8]

(A) Distinguish between DNA and RNA. (4)

(B) Describe HSK pathway. (4)

(C) Explain the development of dicot embryo in Angiosperms. (4)

Q. 5 Explain Kreb's cycle with schematic representation. (8) [8]

OR

(A) Describe the technique of developing transgenic plants with suitable example. (4)

(B) Describe any 'two' natural methods of vegetative propagation in Angiosperms with suitable examples. (4)