

Date 9/3/2010

# H. S. C. BIOLOGY - PAPER I

(GENERAL BIOLOGY AND BOTANY)

Time : 2 Hrs.)

Question Paper : March 2010

(Max. Marks : 40)

Note : Please See to Question Paper March 2008.

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

Q. 2. (A) Write a note on Endemism. OR (2)

Describe the methods of conservation of forests.

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

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. (3)

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

Describe the methods of breaking seed dormancy.

(C) Write a note on Biopatent.

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

Define transpiration Explain its types.

Q. 4. Attempt any TWO of the following. (8)

(A) Distinguish between DNA and RNA.

(B) Describe HSK pathway.

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

Q. 5. Explain Krebs's cycle with schematic representation. OR (8)

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

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

examples.