

# H. S. C. BIOLOGY PAPER - I

Time : 2 Hours)

Question Paper : September 2009

(Max. Marks : 40

\* Note : Refer to Question Paper March 2008. \*

- Q. 1. Select and write the most appropriate answer from the given alternatives for each sub-question.** [8]
- (i) Egg apparatus consists of ..... (1)  
(a) egg and antipodals (b) egg and polar nuclei  
(c) egg and synergids (d) egg and secondary nucleus
- (ii) The net gain of energy from a molecule of glucose in the aerobic respiration is ..... (1)  
(a) 38 ATP (b) 35 ATP (c) 70 ATP (d) 76 ATP
- (iii) Mushrooms contain higher amount of ..... (1)  
(a) Lipids (b) Proteins (c) Carbohydrates (d) Oil
- (iv) In plants growth is due to ..... (1)  
(a) Parenchyma (b) Collenchyma (c) Sclerenchyma (d) Meristem
- (v) The chemical linking of Glycolysis and Krebs cycle is ..... (1)  
(a) Succinic acid (b) Pyruvic acid (c) Citric acid (d) Acetyl Co - A
- (vi) In mushroom cultivation, covering of beds is known as ..... (1)  
(a) Layering (b) Casing (c) Spawning (d) Composting
- (vii) Embryo sac is ..... (1)  
(a) Microgametophyte (b) Microsporangium  
(c) Megagametophyte (d) Megasporangium
- (viii) 2-4 Dichlorophenoxy acetic acid is a ..... (1)  
(a) Insecticide (b) Herbicide  
(c) Flowering hormone (d) Rooting hormone
- Q. 2. (A) Enlist the Medicinal uses of Aloe vera. OR (2) [8]**  
Explain Anabaena and Azolla as a biofertilizer.
- (B) Give practical applications of Cytokinins. OR (2)**  
Explain the factors affecting growth.
- (C) Draw a well labelled diagram of T.S. of Root showing water movement. (2)**
- (D) Explain the role of water resources. (2)**
- Q. 3. (A) Describe Hill reaction. (2) [8]**
- (B) Write a note on Root pressure theory. OR (2)**  
Give significance of Transpiration.
- (C) Write a note on vegetative reproduction by Budding. (2)**
- (D) Describe advantages of Remote sensing technique with respect to Vegetation. OR (2)**  
Give the importance of Forests.
- Q. 4. Attempt any TWO of the following : (8)**
- (A) Distinguish between Aerobic and Anaerobic respiration. (4)**
- (B) Describe floral adaptations in Anemophily and Entomophily. (4)**
- (C) Describe Watson and Crick model of DNA. (4)**
- Q. 5. What is Cloning? Describe plant and animal cloning and give its importance. OR [8]**
- (A) Describe the Calvin cycle. (4)**
- (B) Describe the development of Female gametophyte in Angiosperms. (4)**