

# BIOLOGY QUESTION PAPER

Time : 2 Hrs.

Max. Marks : 40

Note :

- (i) All questions are compulsory. (ii) Figures to the right indicate full marks.
- (iii) Draw neat, labelled diagrams wherever necessary.
- (iv) All questions carry equal marks.
- (v) Answer to every question must be written on a new page.

**Q.1:** Select and write the most appropriate answer from the given alternatives in 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) Casin (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. (2) [8]

OR

(B) Explain Anabaena and Azolla as a biofertilizer.

(B) Give practical applications of Cytokinins. (2)

OR

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. (2)

OR

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. (2)

OR

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. (8) [8]

OR

(A) Describe the Calvin cycle. (4)

(B) Describe the development of Female gametophyte in Angiosperms. (4)