

BIOLOGY (Subjective) GROUP - I

Time: 02:40 Hours

Marks: 68

SECTION – I**2. Write short answers to any EIGHT parts.**

16

- (i) How basic proteins play their role in combined form with nucleic acids?
- (ii) Why enzymes need optimum pH for their proper functioning? Give one example.
- (iii) Why some enzymatic reactions occur in series to form the final products? Explain briefly.
- (iv) Which model for enzyme substrate interaction is more supported? Discuss briefly that model.
- (v) Name four diseases caused by fungi.
- (vi) How karyogamy is different from plasmogamy?
- (vii) Write four characteristics of mammals.
- (viii) Give economic importance of mollusca.
- (ix) Define the term regeneration and name animal which exhibit it.
- (x) What are coral reefs and where they are found?
- (xi) Differentiate between chlorophyll-a and chlorophyll-b.
- (xii) What are the differences between alcoholic and lactic acid fermentation?

3. Write short answers to any EIGHT parts.

16

- (i) Why organ system is less complex in plants as compared to animals?
- (ii) What are adverse effects of use of chemicals during its use to control pests?
- (iii) What is difference between cisternae and cristae?
- (iv) Why mitochondria are called self-replicating organelle?
- (v) From where the Giant Amoeba obtain energy?
- (vi) How ciliates differ from protozoans?
- (vii) Name the parasitic flagellates and disease caused by it and how it is transmitted?
- (viii) Why fungus like protists are not fungi?
- (ix) Differentiate between antheridiophore and archegoniophore.
- (x) Write names of two extinct and two living members of psilopsida.
- (xi) Define guttation. What factors affect it?
- (xii) Write role of lymphatic system in defense of body.

4. Write short answers to any SIX parts.

12

- (i) Write short note on polio.
- (ii) Define plasmids. What is its use?
- (iii) Write any two digestive functions of liver.
- (iv) What is ulcer? Write few lines on it.
- (v) Differentiate ectoparasites and endoparasites with examples.
- (vi) What is the function of parabronchi in birds?
- (vii) Define photorespiration. Give its consequences.
- (viii) Define Calvin Benson Cycle.
- (ix) What the role spiracles play in cockroach respiration?

SECTION – II Attempt any THREE questions. Each question carries 08 marks.
5. (a) Why is some diseases vaccination is used while for others preventive measures are adopted?

04

(b) Discuss major solutes and their role in blood plasma.

04

6. (a) Explain the importance of carbon in living organisms.

04

(b) Describe different methods of asexual reproduction in fungi.

04

7. (a) How does physical methods differ from chemical methods to control bacteria?

04

(b) How does evolution of microphyll differ from evolution of megaphyll?

04

8. (a) Write a note on five kingdom classification system of Robert Whittaker.

04

(b) Sketch the process of glycolysis. (No description required)

04

9. (a) What is endoplasmic reticulum? Write its types and functions.

04

(b) Describe digestion of food in small intestine.

04