

SECTION - I

2. Write short answers to any EIGHT parts.

16

- (i) Differentiate between amylose and amylopectin.
- (ii) Do you think that Koshland change the idea of enzyme action?
- (iii) Write any two properties of enzymes.
- (iv) How heat influence the rate of enzyme action?
- (v) What are two main ecological importances of Lichen's?
- (vi) Differentiate parasitic fungi from saprophytic fungi.
- (vii) Differentiate protostomes from deuterostomes.
- (viii) Why arthropods have reached the peak of invertebrate evolution?
- (ix) How swim bladder help the fish to survive in aquatic environment?
- (x) Write any four characters of birds.
- (xi) Define compensation point.
- (xii) How is daily rhythmic activity of stomata governed?

3. Write short answers to any EIGHT parts.

16

- (i) Name and define the method used to protect walnut tree from pest.
- (ii) The environmental pollution is a national problem in Pakistan. Why?
- (iii) Cell membrane offers a barrier between cell content and environment. Justify it.
- (iv) Golgi complex is concerned with cell secretions. Why?
- (v) Why fungus like protists are not fungi?
- (vi) Water mold played infamous role in human history. Justify it.
- (vii) Write two uses of chlorella.
- (viii) What are red tides?
- (ix) Define protonema.
- (x) What is the role of meristematic tissue in hornworts?
- (xi) Differentiate between source and sink.
- (xii) The heart of fish is single circuit. Why?

4. Write short answers to any SIX parts.

12

- (i) What are the symptoms of AIDS?
- (ii) Differentiate between prions and virions.
- (iii) What is hunger pang? Also write its causes.
- (iv) How gastric juice production is regulated?
- (v) Differentiate between oxyntic cells and zymogen cells.
- (vi) What is diving reflex and how it is activated?
- (vii) Suggest the various characteristics of respiratory surface.
- (viii) What is respiratory distress syndrome?
- (ix) How does respiration take place in Earthworm?

SECTION - II Attempt any THREE questions. Each question carries 08 marks.
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5. (a) Discuss biological method.

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(b) Give comparison between closed and open circulatory system.

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6. (a) What are polysaccharides? Discuss in detail.

04

(b) Give economic losses due to fungi.

04

7. (a) Discuss the structure of bacterial cell wall. Also give comparison between Gram positive and negative bacteria.

04

(b) Discuss the life cycle of Moss.

04

8. (a) Explain five kingdom system of classification in detail. Discuss its modification as well.

04

(b) Discuss various photosynthetic pigments in detail.

04

9. (a) What role plays cytoskeleton in the cell?

04

(b) Discuss parasitic nutrition and its various types.

04