

SECTION – I

Write short answers to any EIGHT parts.

16

- (i) Write at least two characters of xerophytes.
- (ii) What is lithotripsy? How it takes place?
- (iii) What are heat-shock proteins? Give their role.
- (iv) Define cartilage. Give its types.
- (v) What is osteoporosis? Why it occurs in aged women?
- (vi) Differentiate between passive and active flight.
- (vii) What is plasmid? Give an example.
- (viii) What is cystic fibrosis?
- (ix) Define climate and weather.
- (x) How the productivity of aquatic ecosystem is determined?
- (xi) Enlist at least two ways to conserve energy.
- (xii) Differentiate between reforestation and afforestation.

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16

- (i) Differentiate between chemoreceptors and mechanoreceptors.
- (ii) Define reflex arc and give its components.
- (iii) Which hormones are secreted by posterior lobe of pituitary gland?
- (iv) Define seed dormancy. Give its importance.
- (v) What is ovoviviparity? Give its example.
- (vi) Describe the process of cloning.
- (vii) What is a test cross? Give its significance.
- (viii) What are multiple alleles? Give one example.
- (ix) Explain testicular feminization syndrome.
- (x) Define succession. Name its types.
- (xi) Differentiate between habitat and niche.
- (xii) Differentiate between predation and parasitism.

1. Write short answers to any SIX parts.

12

- (i) What is Hensen's node?
- (ii) What is discoidal cleavage?
- (iii) Differentiate between karyokinesis and cytokinesis.
- (iv) What changes occur in a cell during G₁-phase of interphase?
- (v) What are vestigial organs? Give two examples.
- (vi) Define genetic drift. Give its effect on a population.
- (vii) Name three types of RNA's. Give function of each RNA.
- (viii) What are Okazaki fragments?
- (ix) Differentiate between transcription and translation.

SECTION – II

Attempt any THREE questions. Each question carries 08 marks.

5. (a) Define osmoregulation. Describe the various categories of plants on the basis of osmoregulation. 04
(b) Define an ecosystem. Write a note on biotic components of an ecosystem. 04
6. (a) What are paratonic movements? Discuss its various types. 04
(b) Discuss Meselson and Stahl experiment to show semi-conservative replication. 04
7. (a) Explain gonadotrophic hormones. 04
(b) What do you know about wild life? Explain its 04
8. (a) Describe the process of birth in human female. 04
(b) Describe the different patterns of sex determination. 04
9. (a) Explain signs and process of aging. 04
(b) How did evolution proceed from prokaryotes to eukaryotes. 04