

Time: 2:40 Hours

SUBJECTIVE

Marks: 68

Note: Section I is compulsory. Attempt any three (3) questions from Section II.

(SECTION - I)

2. Write short answers to any EIGHT questions.

(2 x 8 = 16)

- i - Why are lipids important to living organisms?
- ii - Why are enzymes considered as integral part of ribosomes?
- iii - How does enzyme accelerate the rate of metabolic reaction?
- iv - Why is catalytic region of active site necessary to enzyme?
- v - Write down two differences between spores and conidia.
- vi - What is parasexuality?
- vii - What is the importance of hook worm from parasitic point of view?
- viii - Differentiate between amniotes and anamniotes. Give example.
- ix - Define metameric segmentation. In which phylum is it found?
- x - Give two basic characteristics of chordates.
- xi - Define bioenergetics. Does it obey the law of thermodynamics?
- xii - What are accessory pigments? Give their role.

3. Write short answers to any EIGHT questions.

(2 x 8 = 16)

- i - What is inductive method to formulate a hypothesis? Give an example.
- ii - Define biome and community.
- iii - Name any two structures / organelles which are common in plant cell, animal cell and prokaryotic cell.
- iv - Compare the cell wall of plant cell and a prokaryotic cell.
- v - Why diatoms are considered as major producer of an aquatic ecosystem?
- vi - Compare foraminiferans and actinopods.
- vii - Write down two characteristics of euglenoids.
- viii - Write down two characteristics of oomycetes.
- ix - What is prothallus? Give its characteristics.
- x - What is overtopping in evolution of megaphyll leaf?
- xi - What is electro cardio gram (ECG)?
- xii - Differentiate between open and close circulatory system.

4. Write short answers to any SIX questions.

(2 x 6 = 12)

- i - What are prions?
- ii - What are water blooms?
- iii - How constipation and diarrhea are caused?
- iv - How sundew shows its insectivorous activity?
- v - Define pyrosis.
- vi - What is myoglobin?
- vii - How air composition changes after breathing?
- viii - Why lungs collapse if gestation age is less than seven months?
- ix - In plants how respiration occurs in presence of light?

(SECTION - II)

Note: Attempt any three (3) questions from Section II.

5. (a) How is Biology important to control diseases in man? (4)
(b) Describe lymphatic system. Also discuss its various functions. (4)
6. (a) Describe importance of water for living organisms. (4)
(b) Write down the characteristics of ascomycetes and importance of yeasts. (4)
7. (a) For growth, maintenance and reproduction nutrients are necessary. How bacteria get them? (4)
(b) Why sporophytes and gametophytes of plants alternate with each other? Give its significance. (4)
8. (a) What is hepatitis? Describe its different types. (4)
(b) Write down the role of water in photosynthesis. (4)
9. (a) Discuss structure and functions of plasma membrane. (4)
(b) Describe digestion in stomach of man. (4)