

Note: Section I is compulsory. Attempt any TWO (2) questions from Section II.

SECTION - I

- Q.2** Write short answers to any FIVE (5) questions: 10
- Which are the major biological issues now a days?
 - Discuss the tissue level with one example.
 - How can you classify the biomolecules? Give their names with definition.
 - Define the term "Bioinformatics".
 - How can we do reporting of our results after experiments?

- Define "Law". Give one example also.
- Write down the Fluid Mosaic Model of cell membrane.
- What is meant by Facilitated Diffusion?

Q.3 Write short answers to any FIVE (5) questions: 10

- What is the role of Muslim scientist Abu-Usman Umer Aljahiz?
- What do you know about Binomial Nomenclature? Who introduced it?
- Differentiate between the two terms "Extinct" and "Endangered" used in classification.
- A nerve cell is not divided after its formation. In which phase of cell cycle is it?
- Plants do not make their gametes by meiosis. What is its reason?
- What type of cell division occurs when wounds are healed?
- Who discovered ATP and who named it as an energy transfer molecule in the living cell?
- Differentiate between oxidation and reduction reaction.

Q.4 Write short answers to any FIVE (5) questions: 10

- Why "Induced Fit Model" is more acceptable than "Lock and Key Model"?
- Differentiate between Protease and Amylase enzyme.
- Define malnutrition and write down names of its kinds.
- Write down the cause of Dengue fever.
- Define minerals and write down the names of any two major minerals.
- What is Pulmonary vein? What is its function?
- Explain "ABO" blood group system in human beings.
- Why do you think that transpiration is a necessary evil for plants?

SECTION-II

- Q.5(a)** Explain Population level and Community level. 5
(b) Write down a note on the factors affecting the rate of transpiration. 4
- Q.6(a)** Write in detail the importance of biodiversity with respect to natural ecosystem with an example. 5
(b) State how the light intensity, concentration of carbon dioxide and temperature affect the rate of photosynthesis? 4

- Q.7(a)** Explain (with the help of diagram) what would happen when plant and animal cells are placed in a hypertonic solution? 5
(b) What is structure and function of small intestine in digestive system? 4