

Biology (Subjective)**SECTION-I**

2. Write short answers of any eight parts from the following. (8x2=16)

- Define biochemistry.
- Differentiate between prosthetic group and co-enzyme.
- How does binding site differ from catalytic site?
- Explain effects of temperature at an enzyme's activity.
- What is nuclear mitosis?
- Differentiate between karyogamy and plasmogamy.
- Differentiate between proterostomia and deuterostomia (any two points).
- Write any two characteristics of chordates.
- How does polyps differ from medusae?
- What is compensation point?
- Explain swim bladder.
- How does electron transport chain necessary for living organisms?

3. Write short answers of any eight parts from the following: (8x2=16)

- Differentiate fresh water biology from Marine biology.
- How hypothesis is formed by an observer?
- Differentiate prokaryotes from Eukaryotes.
- How F_1 particles play a role in energy production?
- Differentiate foraminiferans from Actinopods.
- Write down four characters of Diatoms.
- Why Apicomplexans are considered dangerous? How they can locomote?
- Define imbibition.
- Write down four economic importance of Algae.
- Differentiate Homospores from heterospores.
- Why division Tracheophyta is considered as most successful on land give any two reasons?
- In which group of vertebrates the division of heart is incomplete and why?

4. Write short answers of any six parts from the following: (6x2=12)

- Viruses are called obligate intracellular parasites. Why?
- What are mesosome? Write down their function.
- How scurvy occurs in garden snail.
- Why digestive system of cockroach is more efficient than Hydra?
- Define peristalsis.
- The ventilation of water is far more difficult than air. Give reasons.
- Enlist properties of respiratory surfaces in animals.
- How inhalation and exhalation occurs in cockroach?
- Write down carbon dioxide concentration in arterial and venous blood.

SECTION-II

Note: Attempt any three questions. Each question carries equal marks: (8x3=24)

- (a) Describe the various steps of biological methods to solve a biological problem.
(b) Write down the chemical composition of blood plasma.
- (a) Discuss primary structure of protein
(b) Explain Asexual reproduction in Fungi.
- (a) Why use and misuse of antibiotics are important for human?
(b) What are different adaptive characters developed in bryophytes for land habitat.
- (a) Discuss the Linnaeus system of Binomial nomenclature in detail.
(b) Prove that water is source of oxygen during photosynthesis.
- (a) Explain structure and function of endoplasmic reticulum.
(b) Write a note on digestion in hydra.