Roll No _____ to be filled in by the candidate

HSSC-(P-I)-A/2023

(For All Sessions)

Marks : 68

Time: 2:40 Hours

Biology (Subjective)

(GROUP-I)

SECTION-I

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

i. Define biochemistry.

ii. Differentiate between prosthetic group and co-enzyme.

iii. How does binding site differ from catalytic site?

iv. Explain effects of temperature at an enzyme's activity

v. What is nuclear mitosis?

vi. Differentiate between karyogamy and plasmogamy.

vii. Differentiate between proterostomia and deuterostomia (any two points).

viii. How does polyps differ from medusae?

ix. Write any two characteristics of chordates.

x. Explain swim bladder.

xii. What is compensation point?

xiii. How does electron transport chain necessary for living organisms?

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

i. Differentiate fresh water biology from Marine biology.

ii. How hypothesis is formed by an observer?

iii. Differentiate prokaryotes from Eukaryotes.

iv. How F1 particles play a role in energy production?

v. Differentiate foraminiferans from Actinopods.

vi. Write down four characters of Diatoms.

vii. Why Apicomplexans are considered dangerous? How they can locomote?

viii. Define imbibition.

ix. Write down four economic importance of Algae.

x. Differentiate Homospores from heterospores.

xi. Why division Tracheophyta is considered as most successful on land give any two reasons?

xii. 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)

i. Viruses are called obligate intracellular parasites. Why?

ii. What are mesosome? Write down their function.

iii. How scrapping occurs in garden snail.

iv. Why digestive system of cockroach is more efficient than Hydra?

v. Define peristalsis.

vi. The ventilation of water is far more difficult than air. Give reasons.

vii. Enlist properties of respiratory surfaces in animals.

viii. How inhalation and exhalation occurs in cockroach?

ix. Write down carbon dioxide concentration in arterial and venous blood.

SECTION-II

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

5. (a) Describe the various steps of biological methods to solve a biological problem.

(b) Write down the chemical composition of blood plasma.

6. (a) Discuss primary structure of protein

(b) Explain Asexual reproduction in Fungi.

7. (a) Why use and misuse of antibiotics are important for human?

(b) What are different adaptive characters developed in bryophytes for land habitat.

8. (a) Discuss the Linaeus system of Binomial nomenclature in detail.

(b) Prove that water is source of oxygen during photosynthesis.

9. (a) Explain structure and function of endoplasmic reticulum.

(b) Write a note on digestion in hydra.