



(For All Sessions)

Biology (Objective)

Rwp-11-1-23

(Group-I)

Time: 20 Minutes Marks : 17

Note: Write Answers to the Questions on the objective answer sheet provided. Four possible answers A, B, C and D to each question are given. Which answer you consider correct, fill the corresponding circle A, B, C or D given in front of each question with Marker or Pen ink on the answer sheet provided.

1.1. In protostomes, the blastopore forms the:

- (A) Anus (B) Brain (C) Mouth (D) Excretory pore

2. The body cavity of Nematodes is called:

- (A) Blastocoel (B) Coelom (C) Pseudocoelom (D) Haemocoel

3. Which one is not accessory pigment?

- (A) Chlorophyll "a" (B) Chlorophyll "b" (C) Xanthophyll (D) Carotene

4. Glycolysis occurs in:

- (A) Mitochondria (B) Nucleus (C) Ribosomes (D) Cytosol

5. The stunted growth and chlorosis takes place by the deficiency of:-

- (A) Iron (B) Magnesium (C) Nitrogen (D) Phosphorus

6. Lungs of birds have thin walled ducts called:

- (A) Alveoli (B) Alveolar ducts (C) Bronchi (D) Parabronchi

7. The heart of which animal never receive oxygenated blood?

- (A) Amphibians (B) Fishes (C) Birds (D) Reptiles

8. An hormone released by mesophyll cells at high temperature is:

- (A) Absciscic Acid (B) Thyroxin (C) H_2SO_4 (D) HCl

9. The lowest level of biological organization is:

- (A) Biosphere (B) Ecosystem (C) Community (D) Population

10. Fats and oils have specific gravity of about:

- (A) 0.8 (B) 0.10 (C) 0.12 (D) 0.16

11. The coenzyme is closely related to:

- (A) Apoenzyme (B) Holoenzyme (C) Polypeptide (D) Vitamins

12. The fluid which surrounds the thylakoid is called:

- (A) Stroma (B) Matrix (C) Medium (D) Chlorophyll

13. Temperate phage may exist as:

- (A) Capsid (B) Prophage (C) Viriod (D) Reterovirus

14. The structure which primarily involved in conjugation between bacterial cells is:

- (A) Capsule (B) Slime (C) Flagella (D) Pili

15. Which are the major producers in aquatic ecosystem?

- (A) Green algae (B) Diatoms (C) Slime molds (D) Euglenoids

16. Poisonous mushrooms are also called:

- (A) Agaricus (B) Morels (C) Truffles (D) Toad stools

17. All seed producing plants are called:

- (A) Bryophyta (B) Pteridophyta (C) Rhodophyta (D) Spermatophytes

(For All Sessions)

Biology (Subjective)

(GROUP-I)

Rwp-11-1-23

Time: 2:40 Hours

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).
- ix. Write any two characteristics of chordates.
- viii. How does polyps differ from medusae?
- xii. What is compensation point?
- x. Explain swim bladder.
- 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 F_1 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 Linnaeus 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.