MULTIPLE CHOICE QUESTIONS

1. Unicellular eukaryotes are placed in the kingdom

(a) Monera (b) Protista

(c) Fungi (d) Archaebacteria

2. In some blue green algae like *Nostoc*, nitrogen fixation takes place in

(a) Cell wall (b) Nucleus

(c) Heterocyst (d) Pyrenoid

3. The first stage of gametophyte in bryophytes is known as

(a) Prothallus (b) Protonema

(c) Gemma (d) Gemmule

4. Metamerism is the term which is associated with

(a) Body segmentation (b) Body symmetry

(c) Body cavity (d) Germ layers

5. **The fungal component of lichen is known as**

(a) Phycobiont (b) Mycobiont

(c) Viroid (d) Prion

TWO MARKS QUESTIONS

1. Write notes on characteristic features of living organisms
(Hints: Reproduction, metabolism, cellular organisation, self-consciousness)

2. What is hierarchy of categories?

(Hints: Different steps or stages of classification which follows hierarchy)

3. Give characteristic feature of archaebacteria that help them to survive in extreme situations.

(Hints: The special feature of their cell wall)

4. What you mean by red tide? Name the organism which is responsible for this.

(Hints: *Gonyaulax* – rapid multiplication makes the sea appear red)

5. What is the function of heterocyst?

(Hints: Present in cyanobacteria, helps in nitrogen fixation)

6. How ascomycetes are different from basidiomycetes?

(Hints: Differences in asexual spores and sexual reproduction, fruiting bodies)

7. Why some fungi are called as 'Imperfect fungi'?

(Hints: Deuteromycetes – sexual stage is not known)

8. Distinguish between viruses and viroids.

(Hints: Structural differences – viruses are with genetic material and protein coat but viroids are infectious RNA)

9. Name two pigments other than chlorophyll that are found in algae which help in grouping them into red and brown algae.

(Hints: Fucoxanthin – brown algae and phycoerythrin – red algae, reason)

10. Distinguish between protonema and prothallus.
(Hints: Protonema – creeping stage of gametophyte in bryophytes, prothallus – gametophyte of pteridophytes)

11. Why mosses are considered as amphibians of plant kingdom.

(Hints: They are land plants but need water for reproduction)

12. Differentiate between cryptogams and phanerogams.

    (Hints: Cryptogams – plants with hidden reproductive structures, lower groups; Phanerogams – plants with exposed reproductive structures -, higher groups)

13. What do you understand by metameric segmentation?

    (Hints: Characteristic body segmentation found in annelids)

14. 'All vertebrates are chordates but all chordates are not vertebrates'. Justify the statement.

    (Hints: Mention the features of vertebrates and the classification of chordates)

15. What are flame cells? Give its function.

    (Hints: Specialized excretory cells in flat worms, excretion and osmoregulation)

THREE MARKS QUESTIONS

1. Give a brief description of taxonomic hierarchy of organisms.

   (Hints: Mention briefly about the hierarchy of organisms starting from species till kingdom)

2. (a) What is the difference between *Plasmodium* and plasmodium?

   (b) Give a diagrammatic representation of any one cyanophycean member.
   (Hints: (a) Plasmodium – malarial parasite, a protozoan; plasmodium – fruiting body of slime moulds
   (b) Diagram of Nostoc)

3. Give an outline of classification of archaebacteria
   (Hints: classification – halophiles, thermoacidophiles, methanogens)

4. Describe briefly the four major groups of protozoa.

   (Hints: Ciliated, flagellated, amoeboid, sporozoans)

5. What is notochord? How animals are classified based on notochord?

   (Hints: Definition, classification of chordates)

6. Write short notes on the reproduction of Platyhelminthes.

   (Hints: Internal fertilisation, development through larval stages)

7. Give three basic chordate characters.

(Hints: Notochord, dorsal hollow nervous system, gill slits, ventral heart, post anal tail)

8. Differentiate between Annelida and Arthropoda.

   (Hints: Differences in segmentation, appendages, morphological and anatomical characters)

FIVE MARKS QUESTIONS

1. Give a detailed account of the five kingdom classification
   (Hints: Whittaker's five kingdom classification - table)

2. Explain the following

   (i) Sporophyll (ii) Isogamy (iii) Anisogamy (iv) Diplontic (v) Haplo-diplontic.

   (Hints: (i) Sporophyll – spore bearing leaves in lower groups (ii) Isogamy - fusion of similar gametes (iii) Anisogamy – fusion of different gametes (iv) Diplontic – life cycle with dominant sporophytic stage (v) Haplo-diplontic – life cycle with equally dominant sporophyte and gametophyte)

3. Explain briefly the alternation of generation in bryophytes.

   (Hints: Bryophytes – explanation of Haplo-diplontic life cycle, representation of cycle)

4. Explain briefly the classification of vertebrates

   (Hints: Classification of vertebrates into – Pisces, Amphibia, Reptilia, Aves and Mammalia)