Short Answer Type Questions – I

[2 marks]

Q. 1. Why was the method of classification of animals proposed by Aristotle not accepted?

Ans. Aristotle classified animals on the basis of their habitat, *i.e.,* whether they live on land or in water. But these animals, otherwise are very different from each other in many respects and such a classification does not prove much helpful. So, the method of classification by Aristotle was not accepted.

Q. 2. Describe the hierarchical system of classification currently followed.

Ans. Hierarchy of classification categories was established and designed by Linnaeus. Hierarchy of classification is a system of arrangement of a framework in order of logical sequence. The currently followed hierarchical system for all organisms is
(i) Kingdom **(ii)** Phylum/Division **(iii)** Class **(iv)** Order **(v)** Family **(vi)** Genus **(vii)** Species.

Q. 3. What are phanerogams?

Ans. Phanerogams or spermatophyta are the most advanced type of plants bearing seeds. They have roots, stems, leaves and flowers. They include gymnosperms and angiosperms.

Q. 4. What are mycoplasma?

Ans. Mycoplasmas are the smallest and the simplest organisms. They are prokaryotes having nucleoid. They have heterotrophic mode of nutrition and their body can change forms easily. They are also called as M LO, *i.e.*, Mycoplasma Like Organisms.

Q. 5. List in tabular form, two distinguishing features of dicot plants with monocot plants.

Ans.

Monocots	Dicots
1. Possess one cotyledon.	1. Possess two cotyledons.
2. Fibrous roots.	2. Taproots.
3. Parallel venation.	3. Reticulate venation.

Q. 6. What are lichens?

Ans. Lichens are compound plants as algae and fungi live together in close association, as a result of which both are benefited. This relationship is called symbiosis. They occur as greyish green growths on rocks, bark of the tree or on the ground.

Q. 7. On which basis is the plant kingdom classified?

Ans. The plants have been classified on the following basis:

(i) Phylogeny and evolution.
(**ii)** Presence or absence of vascular tissue for transport of food and water.
(iii) Presence or absence of seeds.
(iv) Presence or absence of fruits.

Q. 8. Why are bryophytes called the amphibians of the plant kingdom?

Ans. The plant bodies of bryophytes are devoid of vascular tissues and roots. So they live in moist habitats in order to obtain water directly or through rhizoids. Moreover, like the amphibians of animal kingdom, the sperms of bryophytes require an external water medium for reaching the eggs. Due to this reason, bryophytes are called the amphibians of the plant kingdom.

Q. 9. What are amphibians?

Ans. Amphibians are the vertebrates that can live both on land and in water. That is why they are also called the vertebrates leading two lives. Their body varies in form and the skin is not covered with scales. They lay eggs in water and their larval forms always live in water. Also, amphibians are cold blooded animals having a three-chambered heart. They breathe through lungs or gills or skin.

Q. 10. What are reptiles?

Ans. Reptiles are the crawling vertebrates that are cold-blooded and have dry horn scales. They are mostly terrestrial and live in warmer regions. They breathe through lungs. The heart is three-chambered, except for crocodiles which have four-chambered heart. Reptiles lay eggs with thick coverings.

Examples: Snakes, lizards, crocodiles, turtles, etc.

Q. 11. What is notochord? What is its function?

Ans. Notochord is a long rod-like support structure that runs along the back of the animals, separating the nervous tissue from the gut. It acts as a supporting structure by providing a place for muscles to attach for the ease of movement.

Q. 12. Why do we keep both snake and turtle in the same class?

Ans. Both snake and turtle are kept in the same class because both are (i) cold-blooded,

(ii) have scales, (iii) breathe through lungs (iv) have three-chambered hearts, and (v) lay eggs with thick covering.

Q. 13. Give reasons why mosses are found in humid and moist areas.

Ans. The entire body of moss in damp humid places can absorb water. Moreover, sperms in mosses are flagellated and so they can reach the archegonia only in presence of water. Thus, water is indispensable in the life cycle of mosses for reproduction as well as for performing other physiological functions.

Q. 14. What is binomial nomenclature?

Ans. In binomial nomenclature, name of every organism is composed of two components-the first one is generic (genus) and the second one is specific (species). Also, the generic name starts with a capital letter whereas the specific name starts with small letter. For example, the scientific name of man is “*Homo sapiens*". Here "*Homo*" is the generic and "*sapiens*" is the specific name.

Q. 15. Which organism is more complex and evolved among bacteria, mushroom and mango tree? Give reasons.

Ans. Mango tree is more complex and evolved because, it is eukaryotic, autotrophic, terrestrial and a sporophyte with covered seed. The bacteria is a unicellular prokaryote and fungi is heterotrophic, simple thallophyte with no tissue system.

Q. 16. Endoskeleton of fishes are made up of cartilage and bone. Classify the following fishes as cartilagenous or bony:

Torpedo, Sting ray, Dog fish, Rohu, Angler fish, Exocoetus

Ans. Torpedo - Carilagenous, Sting ray - Cartilagenous
Dog fish - Cartilagenous Rohu - Bony
Angler fish - Cartilagenous Exocoetus - Bony