



QUESTIONS FROM TEXTBOOK

Question 1. What are the advantages of classifying organisms?

Answer: Advantages of classification:

- Better categorization of living beings based on common characters.
- Easier study for scientific research.
- Better understanding of human's relation and dependency on other organisms.
- Helps in cross breeding and genetic engineering for commercial purposes.

Question 2. How would you choose between two characteristics to be used for developing a hierarchy in classification?

Answer: Gross Character will form the basis of start of the hierarchy and fine character will form the basis of further steps of single the hierarchy.

Example:

1. Presence of vertebral column in human beings can be taken under vertebrata.
2. Presence of four limbs makes them members of Tetrapoda.
3. Presence of mammary glands keeps them under mammalia.

Question 3. Explain the basis for grouping organisms into five kingdoms.

Answer: Basis Of Classification:

- (a) Number of cells
- (b) Layer of cells
- (c) Presence or absence of cell wall
- (d) Mode of nutrition
- (e) Level Of organization

Question 4. What are the major divisions in the Plantae? What is the basis for these divisions?

Answer: Major Divisions of Kingdom plantae:

Division	Basis of Classification
Thallophyta or Algae	Thallus like body
Bryophyta	Body is divided into leaf and stem
Pteridophyta	Body is divided into root, stem and leaf
Gymnosperm	Seed bearing, naked seeds
Angiosperm	Seed bearings covered seeds

Question 5. How are the criteria for deciding divisions in plants different from the criteria for deciding the subgroups among

animals?

Answer: In plants body basic structure is a major criteria based on which Thallophytes are different from Bryophytes. Apart from this absence or presence of seeds is another important criteria. Gymnosperms and angiosperms are further segregated based on if seeds are covered or not. It is clear that it is the morphological character which makes the basis for classification of plants. In animals classification is based on more minute structural variations. So in place of morphology, cytology forms the basis. Animals are classified based on layers of cells, presence or absence of coelom. Further higher the hierarchy animals are classified based on presence or absence of smaller features, like presence or absence of four legs.

Question 6. Explain how animals in Vertebrata are classified into further subgroups.

Answer: Vertebrata is divided into two superclasses, viz. Pisces and Tetrapoda. Animals of Pisces have streamlined body with fins and tails to assist in swimming. Animals of Tetrapoda have four limbs for locomotion.

Tetrapoda is further classified into following classes:

- (a) Amphibia: Are adapted to live in water and on land. Can breathe oxygen through skin when under water.
- (b) Reptilia: These are crawling animals. Skin is hard to withstand extreme temperatures.
- (c) Aves: Forelimbs are modified into wings to assist in flying. Beaks are present. Body is covered with feathers.
- (d) Mammalia: Mammary glands present to nurture young ones. Skin is covered with hair. Most of the animals are viviparous.

***** END *****