

# CHAPTER-7

## DIVERSITY IN LIVING ORGANISMS

### Assignment-

#### **Q1- What is classification?**

A-Classification is the arrangement of organisms into groups and subgroups on the basis of their similarities and dissimilarities.

#### **Q2- What are the advantages of classification of organisms?**

- A-(1) It makes the study of different types of organisms easy.  
(2) It reveals the inter-relationship among the organisms.  
(3) It helps us in exploring the diversity of life forms.

#### **Q3-Define evolution?**

A-Evolution is defined as the study of origin of newer types of organisms from the previous ones by modification, involving genetic changes and adaptation. Charles Darwin first described the idea of evolution in his book 'THE ORIGIN OF SPECIES'.

#### **Q4-Write the criteria on the basis of which organisms are grouped into five kingdoms?**

- A-Whittaker classified the organisms into five kingdoms:-  
(1) whether cells are prokaryotic or eukaryotic.  
(2) whether they are unicellular or multicellular.  
(3) whether the organism is autotrophic or heterotrophic.

#### **Q5-What was the modification introduced by Woese in kingdom Monera?**

A-Carl Woese modified the kingdom Monera by dividing into 'Archaeobacteria and Eubacteria'

#### **Q6-Name one basic characteristic for classifying organisms?**

A-Cell structure.

#### **Q7-What conventions are followed while writing the scientific names?**

- A-(1) The name of the genus begins with capital letter.  
(2) The name of the species begins with a small letter.  
(3) When printed, the scientific name is given in Italics.

(4)When hand written, the names of genus and species have to be underlined separately.

**Q8-Define biodiversity.**

A-Biodiversity means the diversity of life forms.

**Q9-What are the 5 main characteristics of chordates?**

A-(1)They have a notochord.

(2)They have a dorsal nerve cord.

(3) The animals are triploblastic.

(4)They have paired gill pouches.

(5)Chordates are coelomate.

**Q10-What is nomenclature?**

A-Naming a correct scientific name to an organism is nomenclature.

**Q11-Cal-Coral belong to which phylum of animals?**

A-Coelenterata(cnidaria)

**Q12-Which phylum includes segmented worms?**

A-Annelida

**Q13-Will advanced organisms to be same as complex organisms?**

**Why?**

A-Yes. The complex organisms are comparatively more advanced as compared to simple organisms .It is because the complexity of organisms has increased over evolutionary time.

**Q14-Why do we keep both snake and turtle in the same class?**

A-We keep snake and turtle in the same class because:-

a)they are cold blooded

b)have scales

c)breathe through lungs

d)have 3-chambered heart

e)they lay eggs.

**Q15-Give 3 examples of the range of variations that you see in life forms around you?**

A-1)The living organisms vary in size from a few micrometers microscopic bacteria) to more than 30 meters long (blue whale and more than 100 meters tall(red wood trees of California)

2) The living organisms vary in longevity from a few days (mosquitoes) to several thousand years

(pine trees).

3) The living organisms range from colourless or transparent to brightly coloured birds and flowers.

**Q16-Explain the following terms:-**

**1) bilateral symmetry, 2) triploblastic, 3) open circulatory system**

A- 1) It means that the left and right halves of the body have the same design. Ex:- Platyhelminthes.

2) In these animals there are three layers of cells from which differentiate tissues can be made.

3) In this system blood does not flow in well defined blood vessels.

**Q17-Give reasons**

**a) Animals of phylum Platyhelminthes are called flatworm.**

**b) Bryophytes are called amphibians of the plant kingdom .**

**c) Fungi are called saprophytes.**

**d) Bacteria and tapeworms are different in their body design**

**e) Plants like pinus and deodar are called gymnosperms.**

A-a) Animals of phylum Platyhelminthes are called flat worms because the body is flattened dorsiventrally, from top to bottom.

b) Bryophytes are called amphibians of the plant kingdom as they are found on both land as well as in water. They require water to complete their life cycle.

c) Fungi are called saprophytes as they use the decaying organic material as food.

d) Bacteria and tapeworms are very different in their body design due to change in course of evolution.

e) Plant like pinus and deodar are called gymnosperms as the plants of this group bear naked seeds and are usually perennial, evergreen and woody.