

UNIT I: DIVERSITY IN THE LIVING WORLD

2. ANIMAL KINGDOM

1 OMQ + 1 VSAQ + 1 SAQ [1 M + 2M + 4M = 7 M]

ROOT POINTS

1. **Animal kingdom** consists of all animals from the simplest to the most complex.
2. **Main contents of this chapter** are i) Basis of classification ii) Classification of animals.
3. Animal kingdom is mainly divided into **Invertebrates** (without backbone) and **vertebrates** (with backbone).
4. The invertebrates constitute about **90%** of the known animals.
5. **Invertebrates** are characterised by
(i) a segmented body (ii) Jointed appendages (iii) Exoskeleton (iv) Brain
6. **Four fundamental common features in the classification of animals :**
i) Level or organisation(Cellular, Tissue / Organ/ Organ system)
ii) Symmetry (asymmetrical, radial/ bilateral)
iii) Body cavity / Coelom(acoelomata, without body coelom/with false coelom/with true coelom)
iv) Phylum (Porifera, Cnidaria/ Ctenophora, Annelida/ Arthropoda/ Mollusca/ Chordata)
7. **Poikilothermous animals** are cold-blooded animals which don't maintain constant body temperature. [VSAQ]
8. **Homoiothermous animals** are warm-blooded animals which maintain constant body temperature. [VSAQ]
9. **Direct Development** is seen in fish, reptiles, birds and mammals. [VSAQ]
10. **Indirect Development** is seen in vertebrate amphibians. [VSAQ]
11. **Functions of the canal system in sponges:** [VSAQ]
(i) Collection of food (nutrition) (ii) Respiratory exchange of gases (respiration)
(ii) Removal of wastes (excretion).
12. **Cnidoblasts or Cnidocytes** cells are useful for defense and capture of the prey in Cnidarians.
13. The central cavity of coelenterates is called **Gastrovascular cavity.** [FIB]
14. **The skeleton of corals is composed of** calcium carbonate [MCQ]

Invertebrate Phyla (Etymological meaning) with Examples

- (i) **Porifera** (Pore bearing)- Sponges (ii) **Cnidaria** (stinging nettle) - Hydra, Jellyfish, coral
 (iii) **Ctenophora** (Comb bearing)-Comb Jellies (iv) **Platyhelminthes**(Flattened body) - Flat Worms
 (v) **Nematoda** (Thread like)-Round Worms (vi) **Annelida** (Ringed-segmented) - Leeches
 (vii) **Arthropoda**(Jointed Legs)-Spiders, Insects(viii) **Mollusca** (Soft) - Octopus, Squid, Pila
 (ix) **Echinodermata** (Spiny skinned)-Star Fish(x)**Hemichordata**(Half chordates)-Acorn Worms

15. Flatworms belong to the phylum **Platyhelminthes**. [FIB]
16. The excretory cells of flatworms are called **flame cells** (or) **protonephridia**. [VSAQ]
17. **Common name of Ascaris is** Round worms - Asche. [OWQ]
18. Ascaris **is a pseudocoelomate animal**. [MCQ]
19. **Parapodia** are the lateral appendages of Nereis. They are used for **swimming**. [VSAQ]
20. The **second largest phylum** in the animal kingdom **Mollusca**. [FIB]
21. **Molluscs are** triploblastic, coelomates. [MCQ]
22. **Radula** is a file-like **rasping** organ present in molluscs. [VSAQ]
23. Echinodermata **includes spiny bodied animals**. [OWQ]
24. The most distinctive system of echinoderms is the presence of **water vascular system**. [FIB]
25. Hemichordata **possesses a stomochord**. [OWQ]
26. **Balanoglossus is a** hemichordate [MCQ]
27. A **dorsal hollow** nerve chord and a notochord are the two fundamental characters of chordates. [FIB]
28. In Urochordata, the notochord is present only in the **Tail** region of larvae. [FIB]
29. **Notochord persists throughout the life in** Cephalochordata [MCQ]
30. The mouth in cyclostomes is **Round or Circular** in shape. [FIB]
31. **Sea horse belongs to the class** Pisces. [MCQ]
32. **Air bladder in bony fishes helps in** buoyancy. [MCQ]
33. Gills are covered by **Operculum** in bony fishes. [FIB]
34. The skin of cartilaginous fishes contains minute **Placoid** scales. [FIB]
35. Ichthyophis **is a limbless amphibian**. [MCQ]
36. Lizard and Turtle **have dry and cornified skin**. [MCQ]
37. Presence of pneumatic bones is the characteristic feature of **Aves (Birds)** [FIB]
38. Platypus **is an oviparous mammal**. [MCQ]
39. **Ascaris** is characterised by presence of neither true coelom nor metamerism. [2008 PMT]
40. **Flatworms** are triploblastic. [2010 PMT]
41. One of the representatives of phylum arthropoda is **silver fish**. [NEET-2013]
42. Planaria possesses high capacity of **regeneration**. [NEET-2014]
43. **Cnidaria** represents both marine and fresh water species. [NEET-2014]
44. **Exoskeleton** is mainly responsible for diversification of insects on land. [NEET-2015]
45. **Trichinella spiralis** endoparasites of humans does show viviparity. [NEET-2015]
46. In poriferans, the spongocoel is lined with flagellated cells are **choanocytes**. [NEET-2017]
47. Platyhelminthes are bilaterally symmetrical and acoelomates. [NEET-2020]
48. Radial Symmetry is not found in adults of phylum Hemichordata. [NEET-2023]
49. **Annelids** are **true coelomates**. [NEET-2024]
50. All living members of the class cyclostomata are ectoparasites. [NEET-2025]
51. **Water vascular system** helps in **Digestion, Respiration, Locomotion**. [NEET-2025]