

CHAPTER 4

ANIMAL KINGDOM

MULTIPLE CHOICE QUESTIONS

1. In some animal groups, the body is found divided into compartments with at least some organs/ organ repeated. This characteristic feature is named
 - a. Segmentation
 - b. Metamerism
 - c. Metagenesis
 - d. Metamorphosis
2. Given below are types of cells present in some animals. Each one is specialized to perform a single specific function except
 - a. Choanocytes
 - b. Interstitial cells
 - c. Gastrodermal cells
 - d. Nematocytes
3. Which one of the following sets of animals share a four chambered heart?
 - a. Amphibian, Reptiles, Birds
 - b. Crocodiles, Birds, Mammals
 - c. Crocodiles, Lizards, Turtles
 - d. Lizards, Mammals, Birds
4. Which of the following pairs of animals has non glandular skin
 - a. Snake and Frog
 - b. Chameleon and Turtle
 - c. Frog and Pigeon
 - d. Crocodile and Tiger

5. Birds and mammals share one of the following characteristics as a common feature.
 - a. Pigmented skin
 - b. Alimentary canal with some modification
 - c. Viviparity
 - d. Warm blooded nature

6. Which one of the following sets of animals belong to a single taxonomic group?
 - a. Cuttlefish, Jellyfish, Silverfish, Dogfish, Starfish
 - b. Bat, Pigeon, Butterfly
 - c. Monkey, Chimpanzee, Man
 - d. Silkworm, Tapeworm, Earthworm

7. Which one of the following statements is incorrect?
 - a. Mesoglea is present in between ectoderm and endoderm in *Obelia*.
 - b. Radial symmetry is found in *Asterias*
 - c. *Fasciola* is a pseudocoelomate animal
 - d. *Taenia* is a triploblastic animal

8. Which one of the following statements is incorrect?
 - a. In cockroaches and prawns excretion of waste material occurs through malpighian tubules.
 - b. In ctenophors, locomotion is mediated by comb plates.
 - c. In *Fasciola* flame cells take part in excretion
 - d. Earthworms are hermaphrodites and yet cross fertilization take place among them.

9. Which one of the following is oviparous?
 - a. Platypus
 - b. Flying fox (Bat)
 - c. Elephant
 - d. Whale

10. Which one of the following is not a poisonous snake?
 - a. Cobra
 - b. Viper
 - c. Python
 - d. Krait

11. Match the following list of animals with their level of organisation.

| Division of Labour | Animal |
|-----------------------------|-----------------------|
| A. Organ level | i. <i>Pheritima</i> |
| B. Cellular aggregate level | ii. <i>Fasciola</i> |
| C. Tissue level | iii. <i>Spongilla</i> |
| D. Organ system level | iv. <i>Obelia</i> |

Choose the correct match showing division of labour with animal example.

- a. i-B, ii-C, iii-D, and iv-A
 b. i-B, ii-D, iii-C, and iv-A
 c. i-D, ii-A, iii-B, and iv-C
 d. i-A, ii-D, iii-C, and iv-B
12. Body cavity is the cavity present between body wall and gut wall. In some animals the body cavity is not lined by mesoderm. Such animals are called
- a. Acoelomate
 b. Pseudocoelomate
 c. Coelomate
 d. Haemocoelomate

13. Match the column A with column B and choose the correct option

| Column A | Column B |
|------------------|--------------------------------------|
| A. Porifera | i. Canal system |
| B. Aschelminthes | ii. Water-vascular system |
| C. Annelida | iii. Muscular Pharynx Comb plates |
| D. Arthropoda | vi. Jointed appendages |
| E. Echinodermata | v. Metameres |

- a. A-ii, B-iii, C-v, D-iv, E-i
 b. A-ii, B-v, C-iii, D-iv, E-i
 c. A-i, B-iii, C-v, D-iv, E-ii
 d. A-i, B-v, C-iii, D-iv, E-ii

VERY SHORT ANSWER TYPE QUESTIONS

1. Identify the phylum in which adults exhibit radial symmetry and larva exhibit bilateral symmetry.

2. What is the importance of pneumatic bones and air sacs in Aves?
3. What is metagenesis? Mention an example which exhibits this phenomenon.
4. What is the role of feathers?
5. Which group of chordates possess sucking and circular mouth without jaws?
6. Give one example each for an animal possessing placoid scales and that with cycloid scales.
7. Mention two modifications in reptiles required for terrestrial mode of life.
8. Mention one example each for animals with chitinous exoskeleton and those covered by a calcareous shell.
9. What is the role of radula in molluscs?
10. Name the animal, which exhibits the phenomenon of bioluminescence. Mention the phylum to which it belongs.
11. Write one example each of the following in the space provided.
 - a. Cold blooded animal _____
 - b. Warm blooded animal _____
 - c. Animal possessing dry and cornified skin _____
 - d. Dioecious animal _____
12. Differentiate between a diploblastic and a triploblastic animal.
13. Give an example of the following
 - a. Round worm
 - b. Fish possessing poison sting
 - c. A limbless reptile/ amphibian
 - d. An oviparous mammal
14. Provide appropriate technical term in the space provided.
 - a. Blood-filled cavity in arthropods _____.
 - b. Free-floating form of cnidaria _____.
 - c. Stinging organ of jelly fishes _____.
 - d. Lateral appendages in aquatic annelids _____.

15. Match the following:

| Animals | locomotory Organ |
|---------------|------------------|
| a. Octopus | i. Limbs |
| b. Crocodile | ii. Comb plates |
| c. Catla | iii. Tentacles |
| d. Ctenoplana | iv. Fins |

SHORT ANSWER TYPE QUESTIONS

- Differentiate between:
 - Open circulatory system and closed circulatory system
 - Oviparous and viviparous characteristic
 - Direct development and Indirect development
- Sort out the animals on the basis of their symmetry (radial or bilateral) coelenterates, ctenophores, annelids, arthropods, and echinoderms.
- There has been an increase in the number of chambers in heart during evolution of vertebrates. Give the names of the class of vertebrates having two, three or four-chambered heart.
- Fill up the blank spaces appropriately

| Phylum/Class | Excretory Organ | Circulatory Organ | Respiratory Organ |
|--------------|-----------------|-------------------|----------------------------------|
| Arthropoda | | | Lungs/ Gills/ Tracheal System |
| | Nephridia | Closed | Skin/parapodia |
| | Metanephridia | Open | |
| Amphibia | | Closed | Lung |

- Match the following

| | |
|-------------------|--|
| a. Amphibia | i. Air bladder |
| b. Mammals | ii. Cartilaginous notochord |
| c. Chondrichthyes | iii. Mammary glands |
| d. Ostichthyes | iv. Pneumatic bones |
| e. Cyclostomata | v. Dual habitat |
| f. Aves | vi. Sucking and circular mouth without jaws. |

6. Endoparasites are found inside the host body. Mention the special structure, possessed by these and which enables them to survive in those conditions.

7. Match the following and write correct choice in space provided

| Animal | Characteristics |
|--------------|----------------------------|
| a. Pila | i. Jointed appendages |
| b. Cockroach | ii. Perching |
| c. Asterias | iii. Water vascular system |
| d. Torpedo | iv. electric organ |
| e. Parrot | v. Presence of shell |
| f. Dog fish | vi. Placoid scales |

a. _____, b. _____, c. _____
 d. _____, e. _____, f. _____

8. Differentiate between:

- a. Open and closed circulatory system
- b. Oviparity and viviparity
- c. Direct and indirect development
- d. Aceolomate and pseudo coelomate
- e. Notochord and nerve cord
- f. Polyp and medusa

9. Give the characteristic features of the following citing one example of each

- a. Chondrichthyes and ostichthyes
- b. Urochordata and cephalochordata

10. Mention two similarities between

- a. Aves and mammals
- b. A frog and crocodile
- c. A turtle and pila

11. Name

- a. A limbless animal
- b. A cold blooded animal
- c. A warm blooded animal
- d. An animal possessing dry and cornified skin
- e. An animal having canal system and spicules
- f. An animal with cnidoblasts

12. Give an example for each of the following
- A viviparous animal
 - A fish possessing a poison sting
 - A fish possessing an electric organ
 - An organ, which regulates buoyancy
 - Animal, which exhibits alternation of generation
 - Oviparous animal with mammary gland
13. Excretory organs of different animals are given below. Choose correctly and write in the space provided.

| Animal | Excretory Organ/Unit |
|------------------|----------------------|
| a. Balanoglossus | i. Metanephridia |
| b. Leech | ii. Nephridia |
| c. Locust | iii. Flame cells |
| d. Liver fluke | iv. absent |
| e. Sea urchin | v. malpighian tubule |
| f. Pila | vi. Proboscis gland |

a. _____, b. _____, c. _____
 d. _____, e. _____, f. _____

LONG ANSWER TYPE QUESTIONS

- Give three major differences between chordates and non-chordates and draw a schematic sketch of a chordate showing those features.
- What is the relationship between germinal layers and the formation of body cavity in case of coelomate, acoelomates and pseudocoelomates?
- Comment upon the habitats and external features of animals belonging to class, amphibia and reptilia.
- Mammals are most adapted among the vertebrates. Elaborate.