CHAPTER 4

ANIMAL KINGDOM

MULTIPLE CHOICE QUESTIONS

1. In some animal groups, the body is found divided into compartments with serial repitition of at least some organs. This characteristic feature is called
   a. Segmentation
   b. Metamerism
   c. Metagenesis
   d. Metamorphosis

2. Given below are types of cells present in some animals. Which of the following cells can differentiate to perform different functions?
   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. Pneumatic bones
   c. Viviparity
   d. Warm blooded

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. Exhibits radial symmetry *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 ctenophores, locomotion is mediated by comb plates.
   c. In *Fasciola*, flame cells help 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 a non-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

	Column I		Column II
A.	Organ level	i.	*Pheretima*
B.	Cellular aggregate level	ii.	*Fasciola*
C.	Tissue level	iii.	*Spongilla*
D.	Organ system level	iv.	*Obelia*

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. Acoelomates
b. Pseudocoelomates
c. Coelomates
d. Haemocoelomates

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

	Column I		Column II
A.	Porifera	i.	Canal system
B.	Aschelminthes	ii.	Water-vascular system
C.	Annelida	iii.	Muscular pharynx
D.	Arthropoda	iv.	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

1. Differentiate between:
   a. Open circulatory system and closed circulatory system
   b. Oviparous and viviparous characteristic
   c. Direct development and Indirect development

2. Sort out the animals on the basis of their symmetry (radial or bilateral) coelenterates, ctenophores, annelids, arthropods, and echinoderms.

3. 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.

4. 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

5. 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 pseudocoelomate
   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. A viviparous animal
    b. A fish possessing a poison sting
    c. A fish possessing an electric organ
    d. An organ, which regulates buoyancy
    e. Animal, which exhibits alternation of generation
    f. Oviparous animal with mammary gland

13. Excretory organs of different animals are given below. Choose correctly and write in the space provided.

	Animal		Excetory 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

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