CHAPTER 7

STRUCTURAL ORGANISATION IN ANIMALS

MULTIPLE CHOICE QUESTIONS

1. Which one of the following types of cell is involved in making of the inner walls of blood vessels?
   a. Cuboidal epithelium
   b. Columnar epithelium
   c. Squamous epithelium
   d. Stratified epithelium

2. To which one of the following categories does adipose tissue belong?
   a. Epithelial
   b. Connective
   c. Muscular
   d. Neural

3. Which one of the following is not a connective tissue?
   a. Bone
   b. Cartilage
   c. Blood
   d. Muscles

4. Setae help in locomotion in earthworm but are not uniformly present in all the segments. They are present in
   a. 1st segment
   b. Last segment
   c. Clitellar segment
   d. 20th - 22nd segment

5. Which one of the following statements is true for cockroach?
   a. The number of ovarioles in each ovary are ten.
   b. The larval stage is called caterpillar
   c. Anal styles are absent in females
   d. They are ureotelic

6. Match the following and choose the correct option

	Column I		Column II
A.	Adipose tissue	i.	Nose
B.	Stratified epithelium	ii.	Blood
C.	Hyaline cartilage	iii.	Skin
D.	Fluid connective tissue	iv.	Fat storage

Options:

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

7. Match the following and choose the correct option

	Column I		Column II
A.	Hermaphrodite	i.	Produces blood cells and haemoglobin
B.	Direct development	ii.	Testis and ovary in the same animal
C.	Chemoreceptor	iii.	Larval form absent
D.	Blood gland in earthworm	iv.	Sense of chemical substances

Options:

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

8. Match the following with reference to cockroach and choose the correct option

	Column I		Column II
A.	Phallomere	i.	Chain of developing ova
B.	Gonopore	ii.	Bundles of sperm
C.	Spermatophore	iii.	Opening of the ejaculatory duct
D.	Ovarioles	iv.	The external genitalia

Options:

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

9. Match the following and choose the correct option

	Column I		Column II
A.	Touch	i.	Nasal epithelium
B.	Smell	ii.	Foramen magnum
C.	Cranial nerves	iii.	Sensory papillae
D.	Medulla oblongata	iv.	Peripheral nervous system

Options:

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

VERY SHORT ANSWER TYPE QUESTIONS

1. State the number of segments in earthworm which are covered by a prominent dark band or clitellum.
2. Where are sclerites present in cockroach?
3. How many times do nymphs moult to reach the adult form of cockroach?
4. Identify the sex of a frog in which sound producing vocal sacs are present.
5. Name the process by which a tadpole develops into an adult frog.
6. What is the scientific term given to earthworm's body segments?
7. A muscle fibre tapers at both ends and does not show striations. Name the muscle fibre.
8. Name the different cell junctions found in tissues.
9. Give two identifying features of an adult male frog.
10. Which mouth part of cockroach is comparable to our tongue?
11. The digestive system of frog is made of the following parts. Arrange them in an order beginning from mouth.

    Mouth, oesophagus, buccal cavity, stomach, intestine, cloaca, rectum, cloacal aperture
12. What is the difference between cutaneous and pulmonary respiration?
13. Special venous connection between liver and intestine and between kidney and intestine is found in frog, what are they called?

SHORT ANSWER TYPE QUESTIONS

1. Give the location of hepatic caeca in a cockroach. What is their function?
2. Frogs are beneficial for mankind, justify the statement.
3. The body of sponges does not possess tissue level of organisation though it is made of thousands of cells. Comment.
4. Structural organisation in animals attains different levels as cell - organ - organ system. What is missing in this chain? Mention the significance of such an organisation.
5. Stratified epithelial cells have limited role in secretion. Justify their role in our skin.
6. How does a gap junction facilitate intercellular communication?
7. Why are blood, bone and cartilage called connective tissue?
8. Why are neurons called excitable cells? Mention special features of the membrane of the neuron?
9. Why earthworm is called the friend of farmer?
10. How do you distinguish between dorsal and ventral surface of the body of earthworm.
11. Correct the wrong statements among the following:
    a. In earthworm, a single male genital pore is present.
    b. Setae help in locomotion of earthworm.
    c. Muscular layer in the body wall of earthworm is made up of only circular muscles.
    d. Typhlosole is the part of intestine of earthworm.
12. Why nephridia in earthworm that are basically similar in structure classified into three types? Mention the names of each.
13. Common name of some animals are given in Column A, write their scientific name in Column B.

	Column A	Column B
a.	Tiger	_____
b.	Peacock	_____
c.	Housefly	_____

14. Complete the following statement :
    a. In cockroach grinding of food particle is performed by _____
    b. Malpighian tubules help in removal of _____
    c. Hind gut of cockroach is differentiated into _____
    d. In cockroach blood vessels open into spaces called _____

15. Mention special features of eye in Cockroach.

16. Frog is a poikilotherm, exhibits camouflage and undergoes aestivation and hibernation, how are all these beneficial to it?

17. Write the functions in brief in column B, appropriate to the structures given in column A.

Column A		Column B	
a.	Nictitating membrane	i.	_____
b.	Tympanum	ii.	_____
c.	Copulatory pad	iii.	_____

18. Write the appropriate type of tissues in column B according to the functions mentioned in column A.

Column A		Column B	
a.	Secretion and absorption	i.	_____
b.	Protective covering	ii.	_____
c.	Linking and supporting framework	iii.	_____

19. Using appropriate examples, differentiate between false and true body segmentation.

20. What is special about tissue present in the heart?

LONG ANSWER TYPE QUESTIONS

1. Classify and describe epithelial tissue on the basis of structural modifications of cells.

2. Write down the common features of the connective tissue. On the basis of structure and function, differentiate between bones and cartilages.

3. Comment upon the gametic exchange in earthworm during mating.

4. Explain the digestive system of Cockroach with the help of a labelled sketch.

5. Draw a neat and well labelled diagram of male reproductive system of a frog.