

## MR. AYYANAR PGT PRESIDENCY HIGHER SECONDARY SCHOOL PUDUCHERRY

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## BIOLOGICAL SCIENCE

STD : IX

## UNIT : 17 ANIMAL KINGDOM

**I. Choose the correct answer.**

- Find the group having only marine members.  
(a) Mollusca (b) Coelenterata (c) **Echinodermata** (d) Porifera
- Mesoglea is present in  
(a) Porifera (b) **Coelenterata** (c) Annelida (d) Arthropoda
- Which one of the following pairs is not a poikilothermic animal?  
(a) Fishes and Amphibians (b) Amphibians and Aves  
(c) **Aves and Mammals** (d) Reptiles and Mammals
- Identify the animal having four chambered heart.  
(a) Lizard (b) Snake (c) **Crocodile** (d) Calotes
- The animal without skull is  
(a) **Acrania** (b) Acephalia (c) Apterina (d) Acoelomate
- Hermaphrodite organisms are  
(a) Hydra, Tape worm, Earthworm, Amphioxus  
(b) **Hydra, Tapeworm, Earthworm, Ascidian**  
(c) Hydra, Tape worm, Earthworm, Balanoglossus  
(d) Hydra, Tape worm, Ascaris, Earthworm
- Poikilothermic organisms are  
(a) Fish, Frog, Lizard, Man (b) Fish, Frog, Lizard, Cow  
(c) **Fish, Frog, Lizard, Snake** (d) Fish, Frog, Lizard, Crow
- Air sacs and Pneumatic bones are seen in  
(a) fish (b) frog (c) **bird** (d) bat
- Excretory organ of tape worm is  
(a) **flame cells** (b) nephridia (c) body surface (d) solenocytes
- Water vascular system is found in  
(a) Hydra (b) Earthworm (c) **Star fish** (d) Ascaris

**II. Fill in the blanks.**

- The skeletal framework of Porifera is \_\_\_\_\_. **Spicules**
- Ctenidia are respiratory organs in \_\_\_\_\_ **Phylum Mollusca**
- Skates are \_\_\_\_\_ fishes. **Cartilaginous** .
- The larvae of an amphibian is \_\_\_\_\_. **bilaterally symmetrical**
- \_\_\_\_\_ are jawless vertebrates. **Cyclostomes**
- \_\_\_\_\_ is the unique characteristic feature of mammal. **Placenta**
- Spiny anteater is an example for \_\_\_\_\_ mammal. **Egg - laying**

**III. State whether true or false. If false, correct the statement.**

- Canal system is seen in coelenterates. **False**
- Hermaphrodite animals have both male and female sex organs. **True**
- Trachea are the respiratory organ of Annelida. **False**
- Bipinnaria is the larva of Mollusca. **False**
- Balanoglossus is a ciliary feeder. **True**
- Fishes have two chambered heart. **True**

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7. Skin of reptilians are smooth and moist. **False**  
 8. Wings of birds are the modified forelimbs. **True**

9. Female mammals have mammary glands. **True**

**IV. Match the following.**

PHYLUM	EXAMPLES	
(A) Coelenterata	(i) Snail	[D]
(B) Platyhelminthes	(ii) Starfish	[C]
(C) Echinodermata	(iii) Tapeworm	[B]
(D) Mollusca	(iv) Hydra	[A]

**V. Answer very briefly.**

**1. Define taxonomy.**

The theoretical study of classification includes its basic principles, procedures, and rules.

**2. What nematocyst?**

The tentacles of organisms belonging to phylum Coelenterata bear stinging cells called cnidoblast or nematocyst.

**3. Why coelenterates are called diploblastic animals?**

The animals in phylum coelenterates have two layers the outer ectoderm and the inner endoderm in the body wall. It is called diploblastic animals.

**4. List the respiratory organs of amphibians.**

Respiration is through by gills, skin, buccopharynx and lungs.

**5. How does locomotion take place in starfish?**

Locomotion is affected by tube feet.

**6. Are jelly fish and starfish similar to fishes? If no justify the answer.**

- Jellyfish is a coelenterate. Its made of calcium carbonate.
- Starfish is a echinoderm. Its made of calcium carbonate.
- Jellyfish and starfish are invertebrates.
- Fish are vertebrates.

**7. Why are frogs said to be amphibians?**

The frogs have dual adaptation in land and aquatic environments

**VI. Answer briefly:**

**1. Give an account on phylum Annelida.**

- |                                      |  |
|--------------------------------------|--|
| 1. Its bilaterally symmetrical       | 2. Its is triploblastic animals              |
| 3. Its true coelomate animals        | 4. Its is organ system level of organization |
| 5. Its parapodia is locomotor organs | 6.ex Earthworm Leech.                        |

**2. Differentiate between flatworm and round worms?**

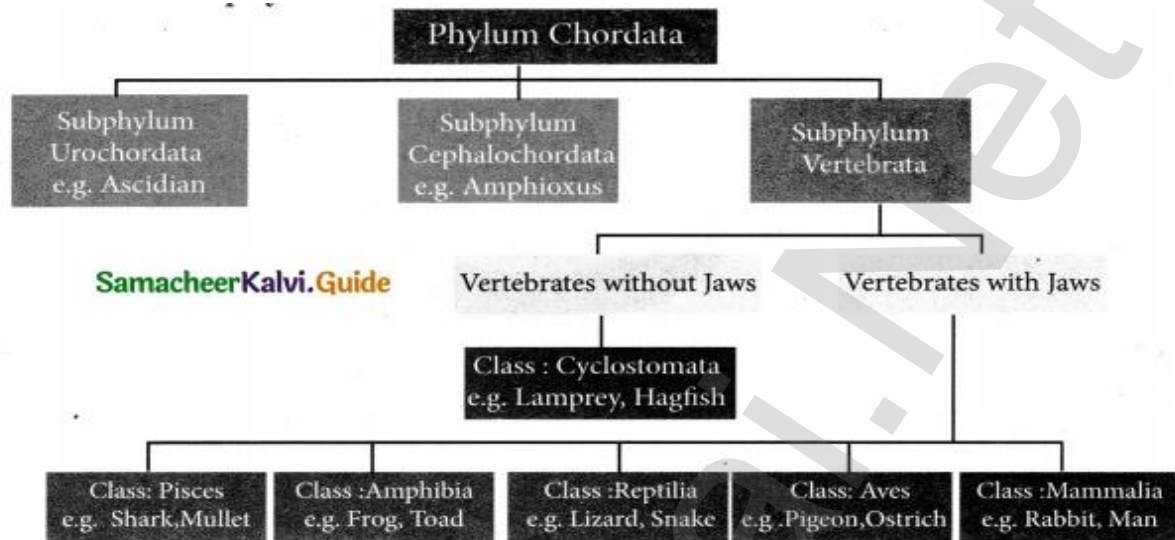
Flatworms	Roundworms
a) They belong to Phylum Platyhelminthes.	They belong to Phylum Aschelminthes.
b) They are mostly parasitic.	Exist as free-living soil forms or as parasites.
c) Mostly hermaphrodites.	Sexual dimorphism is seen.
d) They are acoelomate organisms.	They are pseudocoelomate organisms.

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e) The alimentary canal is absent or simple.  
Eg: Tapeworm.

The alimentary canal is a straight tube.  
Eg: Roundworm.

**3. Outline the flow charts of Phylum Chordata.**



- **List five characteristic features of fishes.**
- The body has a covering of scales.
- Body muscles are arranged into segments called myotomes.
- The body is differentiated into head, trunk and tail.
- Respiration is done by 5 to 7 pairs of gills, which are covered by an operculum or sometimes maybe naked.

**5. Comment on the aquatic and terrestrial habits of amphibians.**

**Aquatic habits of amphibians:**

1. The larva of amphibians (tadpole) lives in water and breathes with gills.
2. External fertilization occurs in frog with water as a medium of fertilization
3. The adult frog has webbed feet to swim in water.
4. The skin is moist and glandular which helps in Respiration.

**Terrestrial habits of amphibians:**

1. The adults live on land and breathe through the lungs. Bucco-pharynx also helps in Respiration.
2. The forelimbs are short and help to hop on land.

**6. How are the limbs of the birds adapted for avian life?**

1. Birds have a spindle-shaped body.

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2. The forelimbs are modified as wings for aerial locomotion.
3. The air sacs present in the birds, make the bird lightweight.
4. The body is covered with feathers.

**VII. Answer in detail :****1. Describe the characteristic features of different Prochordates.**

- The urochordates are considered as the forerunner of vertebrates.
  - Based on the nature of the notochord, protochordate is classified into subphylum Urochordata and subphylum Cephalochordata.
- Phylum Hemichordata :
- Hemichordates are marine organisms with soft, vermiform and unsegmented body.
- They have gill slits but do not have notochord.
  - , e.g- Balanoglossus (Acorn worms).

**Subphylum Urochordata:**

- Notochord is present only in the tail region of free-living larva, e.g. Ascidian
- Adults are sessile forms and mostly degenerate.
- The body is covered with a tunic or test.

**Subphylum Cephalochordata :****1.**

Cephalochordates are small fish like marine chordates with unpaired dorsal fins.

2. The notochord extends throughout the entire length of the body. e.g. Amphioxus

**2. Give an account on phylum Arthropoda.**

1. Arthropoda is the largest phylum.
2. The organisms have jointed legs.
3. The body is segmented into head, thorax and abdomen.
4. The exoskeleton is made up of chitin.
5. The coelomic cavity is filled with haemolymph (blood).
6. They do not have defined blood vessels. This is called open circulatory system.
7. Insects, spiders, crabs, shrimps, butterflies, millipedes, centipedes, and scorpions are some arthropods.