

MISSION M.B.B.S

Date: 08/08/2022

Subject: ZOOLOGY

Topic : ANIMAL KINGDOM L7

Class: Standard XI

Instructions:

A

1. Which among the following is a shared characteristic feature of all chordates?

- ☐ A. Scales
- ☐ B. Jaws
- ☐ C. Vertebrae
- ☒ D. A dorsal hollow nerve cord

A dorsal hollow nerve cord is a characteristic feature of a member of Chordata.

Scales are present in some chordates such as fishes, reptiles and birds. Others such as mammals do not have scales.

The members of Cyclostomata lack jaws. They are the most primitive chordates and belong to Agnatha (jawless).

Vertebrae are found only in vertebrates but not all chordates such as the urochordates and cephalochordates.

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2. *Branchiostoma* belongs to:

- ☐ A. Urochordata
- ☐ B. Hemichordata
- ☒ C. Cephalochordata
- ☐ D. Vertebrata

Branchiostoma (Lancelet or Amphioxus) belongs to Cephalochordata. Protochordates is a group of invertebrate animals that are closely related to vertebrates. This group is composed of the subphyla Urochordata and Cephalochordata.



Branchiostoma

3. Cold-blooded animals are those having

- ☐ A. cold blood
- ☒ B. variable body temperature
- ☐ C. constant temperature
- ☐ D. blood which can flow even below 4°C

Cold-blooded animals are also called poikilotherms. They cannot maintain constant body temperature and it varies according to changes in the external temperature. Eg: Fishes, amphibians and reptiles.

Warm-blooded animals or homeotherms, maintain constant body temperature, irrespective of the external temperature. Eg: Birds, mammals.

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4. The common feature shared by *Amphioxus*, *Salpa* and *Doliolum* is _____.

- ☒ A. presence of a vertebral column
- ☒ B. presence of a notochord throughout their life
- ☒ C. similar habitat
- ☒ D. presence of a solid nerve cord

Amphioxus, *Salpa* and *Doliolum* are protochordates and they are exclusively marine.

They do not have a vertebral column as they are invertebrates. They have a notochord.

Amphioxus has a persistent notochord which is present throughout its life. *Salpa* and *Doliolum* have a notochord only in their larval stages. Adult stages lack notochord. The nerve cord in these animals is hollow and not solid.

5. Which among the following is a chordate?

- ☒ A. Crayfish
- ☒ B. Dogfish
- ☒ C. Starfish
- ☒ D. Silverfish

Dogfish is a chordate. It is a cartilaginous fish.

Crayfish is an arthropod.

Starfish is an echinoderm.

Silverfish is also an arthropod.

Crayfish, starfish and silverfish are all non-chordates.

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6. Which among the following is absent in sharks?

- ☒ A. Gill cover
- ☐ B. Gill slits
- ☐ C. Scales
- ☐ D. Pelvic fins

Sharks do not have operculum or gill cover. The gills are naked. They have 5-7 pairs of gill slits. Sharks have minute placoid scales embedded in the skin and have fins for locomotion.



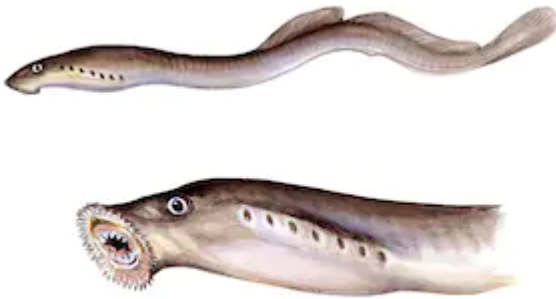
Shark

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7. Lamprey is

- ☐ A. not parasitic
- ☒ B. jawless vertebrate
- ☐ C. jawed fish
- ☐ D. with paired fins

Lampreys belong to Cyclostomata. These are primitive vertebrates that lack jaws. They have a circular mouth, is parasitic and do not have paired fins.



Lamprey

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8. Chordates are distinguished from non-chordates by the presence of

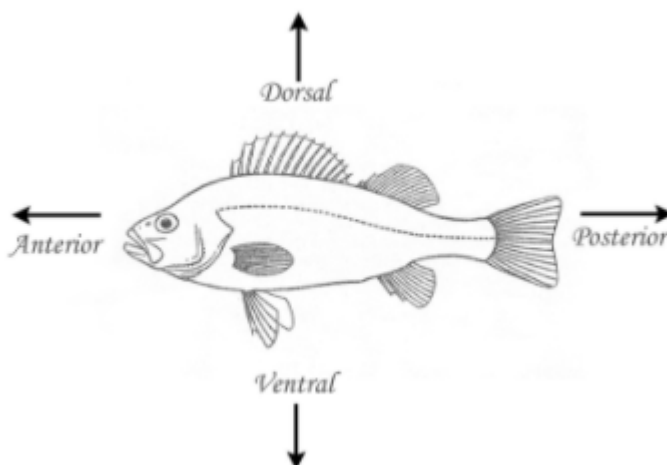
- ☒ A. closed circulatory system
- ☒ B. a ventral tubular nerve cord
- ☒ C. cold or warm blooded
- ☒ D. post-anal tail

All the chordates have a post-anal tail at some point in their life. Non-chordates lack tail.

Chordates have dorsal tubular nerve cord. Dorsal refers to the backside of the organism and ventral refers to the front or the abdominal side of the organism. Chordates are cold or warm blooded animals but most of the non-chordates are cold blooded.

All chordates have a closed circulatory system.

Some non-chordates like annelids also have a closed circulatory system.



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9. Tunicates have

- ☐ A. a vertebral column in the tail of the adult stage
- ☒ B. a notochord in the tail of the larval stage
- ☐ C. a notochord in the tail of the adult stage
- ☐ D. a vertebral column in the tail of the larval stage

Tunicates are also called urochordates and they have notochord in the tail of the larval stage. The larva undergoes a metamorphosis. Metamorphosis is a process of transformation of an immature larva into a mature adult. The adult loses its tail and hence adults lack notochord.

10. What do craniates have that earlier chordates did not have?

- ☐ A. Brain
- ☐ B. Nerve cord
- ☐ C. Post anal tail
- ☒ D. Skull

Craniates are vertebrates in which the brain is covered and protected by a bony box called cranium, which is a part of the skull. The earliest chordates are protochordate and they lack a skull. All chordates have a brain, a nerve cord and a tail.