MISSION M.B.BS

Date: 20/07/2022

Subject: ZOOLOGY

Topic : ANIMAL KINGDOM - L2 Class: Standard XI

Instructions:

A

1. In Platyhelminthes,

   ✓ **A.** nerve cords are present

   ✗ **B.** nerve cords are absent

   ✗ **C.** nerve nets are present

   ✗ **D.** nerve nets and nerve cords are present

   The nervous system of Platyhelminthes consists of nerve cord extending in different directions.
   Nerve nets are present in Cnidarians, Ctenophores and also in starfish which belongs to phylum Echinodermata.

2. Select the correct difference between a male and a female *Ascaris* worm.

	Male *Ascaris*	Female *Ascaris*
i.	Longer than female	Shorter than male
ii.	Posterior end is curved	Posterior end is straight
iii.	Cloaca absent	Cloaca is present

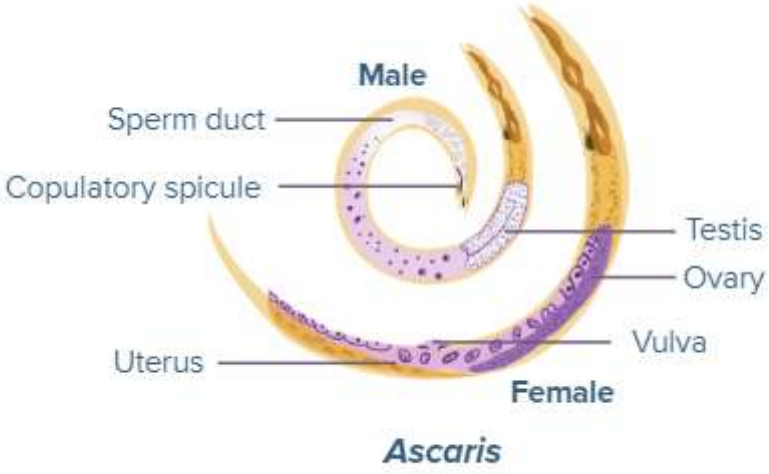
✗ **A.** i and ii only

✗ **B.** ii and iii only

✓ **C.** ii only

✗ **D.** iii only

Ascaris belongs to the phylum Aschelminthes. *Ascaris* is dioecious, which means it has separate sexes. Males and females are morphologically distinct. Females are longer than males. Posterior ends of males are hooked or curved while females have a straight posterior end. Cloaca is the last part of the rectum in males. It is located at the posterior end and receives both faeces and sperms. It is absent in females.



Ascaris

3. The poisonous fluid present in nematocyst of *Hydra* is

✗ **A.** venom

✗ **B.** haematin

✗ **C.** toxin

✓ **D.** hypnotoxin

Nematocysts are venom-containing stinging organelles located in cnidocytes in cnidarians. The nematocyst is filled with a poisonous fluid called hypnotoxin. This is a mixture of proteins and phenols. The nematocyst is used for defence response of *Hydra.*

Any poisonous substance is called a toxin. Venom is a toxin which is present in some animals such as snakes, bees, scorpion, salamander, etc.

Haematin is a dark bluish or brownish pigment which is derived from the hemoglobin by the removal of the protein part and oxidation of haem resulting in the ferric state of iron.

4. Presence of comb plates is a characteristic feature of

✗ **A.** *Ascaris*

✗ **B.** *Planaria*

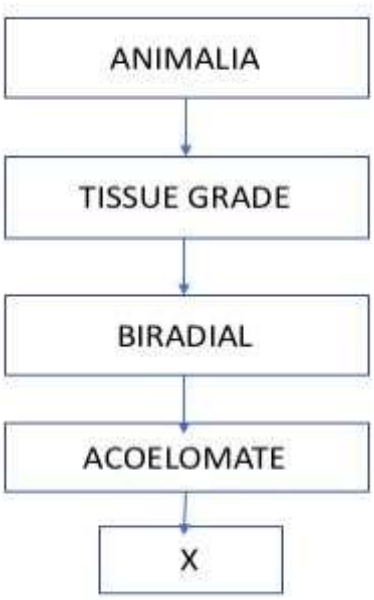
✓ **C.** *Pleurobrachia*

✗ **D.** *Aurelia*

Comb plates are a characteristic feature of Ctenophores, i.e., *Pleurobrachia.* It has eight external rows of ciliated comb plates which help in locomotion. Hence, these organisms are also known as comb jellies.

Ascaris and *Planaria* are in Phylum Aschelminthes and Platyhelminthes respectively. *Aurelia* is in Phylum Cnidaria or Coelenterata.

5. Identify the phylum X.



A. Porifera

B. Aschelminthes

C. Platyhelminthes

D. Ctenophora

Ctenophores have tissue grade level of organisation but are radially symmetrical. They are diploblastic and have no body cavity or coelom. Hence, they are called acoelomate.

Poriferans show a cellular level of body organisation.
Organisms in phylum Platyhelminthes and onwards are bilaterally symmetrical.
Platyhelminthes show organ level and Aschelminthes show organ system level of organisation, i.e., organs get associated to perform specific physiological functions.

6. Medusa of Coelenterata is

A. sexually reproducing

B. free swimming

C. umbrella shaped

D. all of these

Medusa is the sexually reproducing stage in the life cycle of Coelenterates such as *Aurelia.* It is a free-swimming form with an umbrella shape. As medusa is the sexual form, they produce gametes which fuse to form asexual form called polyp.

7. Which of the following features is seen in Cnidarians?

A. Organ level of organisation

B. Triploblastic

C. Coelomates

D. Radial symmetry

Cnidaria or Coelenterata are radially symmetrical with tissue level of organisation and diploblastic in nature. They are devoid of coelom or body cavity.

Organisms in phylum Platyhelminthes and onwards, are triploblastic with bilateral symmetry. Organisms in phylum Platyhelminthes have organ level of organisation. Phyla after Platyhelminthes have organ system level of organisation.

Phylum Annelida and onwards have true coelom.

8. Which one of the following phylums consists of animals that are bilaterally symmetrical and triploblastic?

- ✔ **A.** Aschelminthes (Roundworms)
- ✘ **B.** Ctenophores
- ✘ **C.** Sponges
- ✘ **D.** Coelenterates (Cnidarians)

Aschelminthes are triploblastic animals having bilateral symmetry. If the body of an organism can be divided into two equal halves on cutting it in one specific plane passing through the centre, then the symmetry is called bilateral symmetry.

Triploblastic animals have all the three germinal layers - ectoderm, endoderm and mesoderm.

Ctenophores and Coelenterates (Cnidarians) are radially symmetrical and diploblastic. They can be cut in any plane passing through the centre to get equal halves and have only two germinal layers - outer ectoderm and inner endoderm.

Sponges are asymmetrical i.e., which cannot be cut in any plane to get equal halves and diploblastic.

9. Hooks and suckers are present in:

- ✔ **A.** Tapeworm
- ✘ **B.** Earthworm
- ✘ **C.** Hydra
- ✘ **D.** *Pleurobrachia*

Hooks and suckers are present in tapeworm. Tapeworm is an intestinal parasite and is in phylum Platyhelminthes. It gets attached to the host intestine with the help of hooks. In some organisms such as Flukes, there are one of the two types of suckers (oral suckers) help to imbibe the food from the host.

Hooks and suckers are absent in earthworm, *Hydra* and *Pleurobrachia*. They are not parasites and are all free-living animals.

10. First animals that were triploblastic and showed bilateral symmetry and organ level of organisation were a part of:

- **A.** Phylum Ctenophores
- **B.** Phylum Aschelminthes
- **C.** Phylum Platyhelminthes
- **D.** Phylum Cnidaria

Animals belonging to the phylum Platyhelminthes were the first to have three germ layers (triploblastic) and show bilateral symmetry and organ level of organisation. They have specialised organs for excretion such as flame cells. Nerve cords form the nervous system.