

Chapter – 2

Kingdom Animalia

I. Multiple Choice Questions

Choose the correct answer

Question 1.

The symmetry exhibited in cnidarians is-

- (a) Radial
- (b) Bilateral
- (c) Pentamerous radial
- (d) Asymmetrical

Answer:

- (a) Radial

Question 2.

Sea anemone belongs to phylum-

- (a) Protozoa
- (b) Porifera
- (c) Coelenterata
- (d) Echinodermata

Answer:

- (c) Coelenterata

Question 3.

The excretory cells that are found in platyhelminthes are –

- (a) Protonephridia
- (b) Flame cells
- (c) Solenocytes
- (d) All of these

Answer:

- (d) All of these

Question 4.

In which of the following organisms, self-fertilization is seen?

- (a) Fish
- (b) Round worm
- (c) Earthworm
- (d) Liver fluke

Answer:

- (d) Liver fluke

Question 5.

Nephridia of Earthworms are performing the same functions as –

- (a) Gills of prawn
- (b) Flame cells of Planaria
- (c) Trachea of insects
- (d) Nematoblasts of Hydra

Answer:

- (b) Flame cells of Planaria

Question 6.

Which of the following animals has a true coelom?

- (a) Ascaris
- (b) Pheretima
- (c) Sycon
- (d) Taenia solium

Answer:

- (b) Pheretima

Question 7.

Metameric segmentation is the main feature of –

- (a) Annelida
- (b) Echinodermata
- (c) Arthropoda
- (d) Coelenterata

Answer:

- (a) Annelida

Question 8.

In Pheretima locomotion occurs with help of –

- (a) circular muscles
- (b) longitudinal muscles and setae
- (c) circular, longitudinal muscles and setae
- (d) parapodia

Answer:

- (c) circular, longitudinal muscles and setae

Question 9.

Which of the following have the highest number of species in nature?

- (a) Insects
- (b) Birds
- (c) Angiosperms
- (d) Fungi

Answer:

- (a) Insects

Question 10.

Which of the following is a crustacean?

- (a) Prawn
- (b) Snail
- (c) Sea anemone
- (d) Hydra

Answer:

- (a) Prawn

Question 11.

The respiratory pigment in cockroach is –

- (a) Haemoglobin
- (b) Haemocyanin
- (c) Oxyhaemoglobin

(d) Haemoerythrin

Answer:

(d) Haemoerythrin

Question 12.

Exoskeleton of which phylum consists of chitinous cuticle?

- (a) Annelida
- (b) Porifera
- (c) Arthropoda
- (d) Echinodermata

Answer:

(a) Annelida

Question 13.

Lateral line sense organs occur in –

- (a) Salamander
- (b) Frog
- (c) Water snake
- (d) Fish

Answer:

(d) Fish

Question 14.

The limbless amphibian is –

- (a) Ichthyophis
- (b) Hyla
- (c) Rana
- (d) Salamander

Answer:

(a) Ichthyophis

Question 15.

Four chambered heart is present in –

- (a) Lizard

- (b) Snake
- (c) Scorpion
- (d) Crocodile

Answer:

- (d) Crocodile

Question 16.

Which of the following is not correctly paired?

- (a) Humans – Ureotelic
- (b) Birds – Uricotelic
- (c) Lizards – Uncotelic
- (d) Whale – Ammonotelic

Answer:

- (d) Whale – Ammonotelic

Question 17.

Which of the following is an egg laying mammal?

- (a) Deiphinus
- (b) Macropus
- (c) Ornitho rhynchus
- (d) Equus

Answer:

- (c) Ornitho rhynchus

Question 18.

Pneumatic bones are seen in –

- (a) Mammalia
- (b) Aves
- (c) Reptilia
- (d) Sponges

Answer:

- (b) Aves

Question 19.

Match the following columns and select the correct option.

Column – I	Column – II
(P) Pila	(i) Devil fish
(q) Dentalium	(ii) Chiton
(r) Chaetopleura	(iii) Apple snail
(s) Octopus	(iv) Tusk shell

- (a) p – (ii), q – (i), r – (iii), s – (iv)
- (b) p – (iii), q – (iv), r – (ii), s – (i)
- (c) p – (ii), q – (iv), r – (i), s – (iii)
- (d) p – (i), q – (ii), r – (iii), s – (iv)

Answer:

- (b) p – (iii), q – (iv), r – (ii), s – (i)

Question 20.

In which of the following phyla, the adult shows radial symmetry but the larva shows bilateral symmetry?

- (a) Mollusca
- (b) Echinodermata
- (c) Arthropoda
- (d) Annelida

Answer:

- (b) Echinodermata

Question 21.

Which of the following is correctly matched?

- (a) Physalia – Portuguese man of war
- (b) Pennatula – Sea fan
- (c) Adamsia – Sea pen
- (d) Gorgonia – Sea anemone

Answer:

(a) Physalla – Portuguese man of war

Question 22.

Why are spongin and spicules important to a sponge?

Answer:

- Choanocytes or collar cells are special I flagellated cells lining the spongocoel and the canals.
- The body is supported by a skeleton made of spicules or spongin or both.
- The spicules are made up of calcium and silica.

Question 23.

What are the four characteristics common to most animals?

Answer:

The characteristics common to most animals are the arrangement of cell layers.

- The levels of organization.
- Nature of coelom.
- The presence or absence of segmentation and notochord.
- Organization of the organ system.

Question 24.

list the features that all vertebrates show at some point in their development.

Answer:

1. Embryonic germ layer

a) Endoderm, b) Ectoderm – Two germinal layers.

2. a) Ectoderm, b) Endoderm, c) Mesoderm – Three germinal layers,

3. Organogenesis

- Ectoderm – Skin, Hair, Nerve, Tooth, Nail
- Endoderm – Intestine lung, Liver
- Mesoderm – Muscle, Bones, Heart

Question 25.

Compare closed and opened circulatory systems.

Answer:

Closed circulatory system:

- The circulation in which blood is present inside the blood vessels is called closed circulatory' system
- It is found in higher organisms, e.g. annelids, cephalochordates and vertebrates.

Open circulatory system:

- The circulation in which blood remains filled in tissue spaces due to the absence of blood vessels is called open circulatory system.
- It is found in lower organisms. e.g. arthropods, molluscs and echinoderms.

Question 26.

Compare Schizocoelom with enterocoelom.

Answer:

Schizocoelom:

- The coelom which is formed by splitting of Mesoderm is called schizocoelom.
- It is found in lower invertebrates like annelids, arthropods and molluscs.

Enterocoelom:

- The coelom which is formed from the Mesodermal pouches of archenteron is called enteroceolem.
- It is found in echinoderms, hemichordates and chordates.

Question 27.

Identify the structure that the archenteron becomes in a developing animal.

Answer:

The true coelom called enterocoel formed from the archenteron.

Question 28.

Observe the animal below and answer the following questions

- (a) Identify the animal
- (b) What type of symmetry does this animal exhibit?
- (c) Is this animal Cephalized?
- (d) How many germ layers does this animal have?
- (e) How many openings does this animal's digestive system have?
- (f) Does this animal have neurons?



Answer:

- (a) Sea anemone (Adarnasia)
- (b) Radial symmetry
- (c) No
- (d) Two (ectoderm and endoderm)
- (e) One
- (f) No.

Question 29.

Choose the term that does not belong in the following group and explain why it does not belong?

Answer:

The notochord, cephalization, dorsal nerve cord, and radial symmetry
Unrelated characters:

Radial Symmetry Notochord, Cephalization dorsal nerve chord, are

characteristic features of chordate animals. Radial Symmetry This is the feature of the invertebrate organism.

Question 30.

Why flat worms are called acoelomates?

Answer:

Flat worms are called acoelomate because they do not possess a body cavity.

Question 31.

What are flame cells?

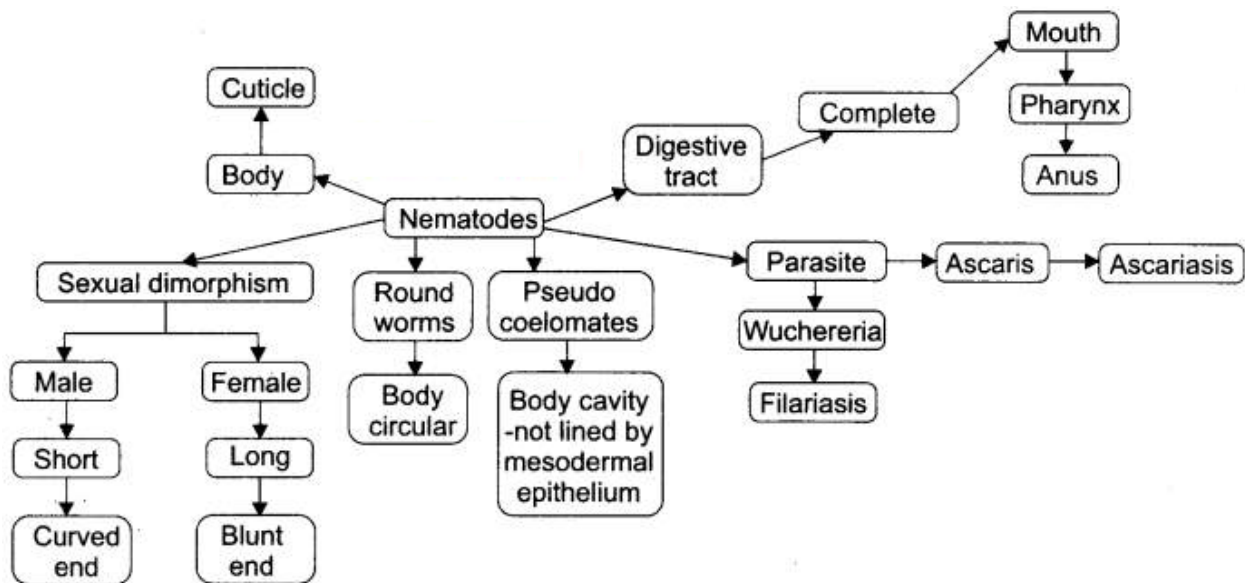
Answer:

Specialized excretory cells present in flatworms called flame cell helps in Osmoregulation and excretion.

Question 32.

Concept Mapping – Use the following terms to create a concept map that shows the major characteristic features of the phylum nematoda: Round worms, pseudocoelomates, digestive tract, cuticle, parasite and sexual dimorphism.

Answer:



Question 33.

In which phyla is the larva trochopore found?

Answer:

Trochopore larva is seen in the Phylum – Annelida.

Question 34.

Which of the chordate characteristics do tunicates retain as adults?

Answer:

1. Presence of notochord below the nerve cord and above the alimentary canal.
2. The dorsal nerve cord lies above the notochord and below the dorsal body wall.
3. Pharyngeal gill slits at some stage of their life cycle.

Question 35.

List the characteristic features that distinguish cartilaginous fishes with living jawless fishes.

Answer:**Cartilaginous Fishes:**

- These have powerful jaws which help in predation.
- These are free living predatory fishes.
- These are advanced over jawless fishes.
- These have a tough skin covered by dermal
- Respiration is by lamelliform gills without operculum.
- Paired fins are present.
- Fertilization is internal
- Viviparous e.g. Scoliodon

Living Jawless Fishes:

- They do not have jaws and the mouth is circular and suctorial.
- These are ectoparasites on fishes.
- These are primitive over cartilaginous fishes.

- The skin is soft and devoid of scales.
- These have six to fifteen pair of gills slits.
- Paired fins are absent.
- Fertilization is external
- Oviparous, e.g. Lamprey

Question 36.

List three features that characterize bony fishes.

Answer:

1. The body is spindle-shaped skin is covered by ganoid cycloid or Ctenoid scales.
2. They have four pairs of filamentous gills with operculum on either side.
3. Air bladder helps in gaseous exchange and for maintaining buoyancy.
4. Sexes are separate.
5. They have lateral line sense organs. The kidney is mesonephric.

Question 37.

List the functions of air bladder in fishes.

Answer:

- Air bladder helps in gaseous exchange.
- It helps in maintaining buoyancy.

Question 38.

Write the characteristics that contributes to the success of reptiles on land.

Answer:

- The body of the reptile is covered by dry and cornified skin with epidermal scales or scutes.
- All are poikilotherms.
- Most reptiles lay cleidoic eggs.
- Excretion is by metanephric kidneys and is uricotelic.

- They are monoecious.
- Internal fertilization is taking place

Question 39.

List the unique features of bird's endoskeleton.

Answer:

- The endoskeleton of birds is bony
- The long bones are hollow with air cavities (pneumatic)
- The body is covered by feathers.

Question 40.

Could the number of eggs or young ones produced by an oviparous and viviparous female be equal? Why?

Answer:

- Each female gamete from a female unites with a male gamete (spermatozoa) of a male through internal or external fertilization and form a zygote that will become an individual.
- The number of female gametes produced is united with that much number of male gametes and produced that much number of individuals. Hence the egg or young ones produced by the oviparous or viviparous females are equal.