Short Answer Type Questions-II

Q.1. Which symmetry is most common in animals? Define it.? [Most Imp.]

Ans. Bilateral symmetry.

In bilateral type of symmetry, the body can be divided into two equal halves by a single plane only because the important body organs are paired and occur on the two sides of a central axis.

Q.2. Define germinal layers.

Ans. (i) Germinal or germ layers are primary layers of cell which differentiate in developing embryo and from which various tissues and organs of the animal body develop.

(ii) A maximum of three germinal layers are found in embryo. They are ectoderm, mesoderm and endoderm. Out of these, mesoderm is the last to develop in between ectoderm and endoderm.

Q.3. What is metamerism ? Differentiate between metameric and non metameric segmentation ? [DDE Practice Paper]

Ans. Segmentation of external and internal body into linear sequence of segments (repetition of atleast some organ) is called metamerism.

Metameric Segmentation: External segmentation correspond to internal segmentation, e.g., Earthworm.

Non-metameric Segmentation : External segmentation do not correspond internal segmentation, e.g. Platyhelminthes.

Q.4. What are the peculiar features that you find in parasitic platyhelminthes ?

Ans. The main features of platyhelminthes are given below :

(i) They have dorso-ventraly flattened body, hence are called flatworms.

(ii) Hooks and suckers are present, which absorb nutrients from the host directly through their body surface.

(iii) Flame cells are present, which helps in osmoregulation and excretion.

(iv) Some members like Planaria possess high regeneration capacity.

(v) **Example :** Tapeworm, Liver fluke etc.

Q.5. What are corals and coral reefs ?

Ans. Corals are minute cnidarians, which secrete deposits of lime and calcium carbonate. **Coral reefs :** In many coral species, new living corals develop over the old dead corals giving rise to coral reefs and island. The coral reefs provide a comfortable living place for a variety of animal species. They form stable marine ecosystems. Q.6. Write short notes on:

(i) Malphigian tubules

(ii) Medusa

(iii) Flame cells

(iv) Cephalothorax

Ans. (i) Malphigian tubules : These are excretory organs in insects and cockroach.

(ii) Medusa : It is a reproductive zooid meant for sexual reproduction in Obelia.

(iii) Flame cells: They are excretory organs of Fasciola and Taenia.

(iv) Cephalothorax : Head and thorax fuse to form cephalothorax in some arthropods. It bears antennae, antennules, eyes, maxillipeds and legs.

Q.7. Differentiate between male and female Ascaris. [V. Imp.]

Ans.

S.No.	Male Ascaris	Female Ascaris
(i)	15-30 cm. long.	20-40 cm. long.
(ii)	Posterior end is curved.	Posterior end is straight.
(iii)	No vulva present.	vulva present.
(iv)	There are two pineal spicules from cloacal pore.	No pineal spicules.
(v)	Pre-anal and post-anal papillae are present.	There are no such structure.

(Any three)

Q.8. Members of which phylum are known as "the segmented worms" ? Name the excretory units of these organisms. Write about their body symmetry and mode of respiration also.

Ans. The members of phylum Annelida are known as the segmented worms". Their body is metamerically segmented. The excretory units of these invertebrates are coiled tubules, the nephridia.

Example : Nereis, Pheretima and Hirudinaria.

Body Symmetry: Segmented worms have the typical metameric segmentation. Their body consists of segments called somites or metameres and ring like grooves known as annuli. They have bilateral symmetry.

Respiration : Respiration in annelids occurs by the skin. In some, gills are present.

Q.9. Give important characters of Phylum Aschelminthes.

Ans. Phylum Aschelminthes:

(i) Commonly known as round worms or nematodes and covered by cuticle.

(ii) Body is bilaterally symmetrical.

(iii) They are animals with elongated cylindrical and spindle-shaped body with pointed ends.

(iv) The body cavity is a false coelom called pseudocoelom.

(v) The alimentary canal lacks a muscle layer.

(vi) Respiratory organs and blood vascular systems are absent.

Example : Ascaris (Round worm), Oxyuris (Pin worm), Ancylostoma (Hook worm),

Enterobius, and Rhabditis etc.

Q.10. (i) Name any two phyla which have parasitic members.

(ii) What is bioluminescence? Give an example.

[KVS 2016]

Ans. (i) Two phyla which have parasitic members are:

(a) Platyhelminthes: The Flatworms.

(b) Achelminthes : The Round worms.

(ii) Bioluminiscence is the production and emission of light by a living organisms. It is a form of chemiluminescence .e.g. Noctiluca, Gonyaulax.

Q.11. (i) How important is the presence of air bladder in class Osteichthyes ? (ii) Expand ICZN. [KVS 2016]

Ans. (i) Class osteichthyes (Bony fishes) have a sac-like outgrowth, called air bladder, arising from the dorsal wall of the oesophagus. It is air filled organ, used to maintain balance and to swim up and down. It also enables the fish to stay at particular depth without spending energy.

(ii) International Code of Zoological Nomenclature.

Q.12. How are the animals of Arthropoda different from those of Mollusca? [KVS 2017]

S.No. Arthropoda Mollusca (i) Body is divided into head, thorax Soft body is divided into three distinct and ab- domen. parts : a distinct head, visceral mass and muscular foot. (ii) Body is covered by chitinous Body is covered by calcareous shell. exoskeletons. (iii) They have jointed ap-pendages. They have distinct foot for moving around. Excretion occurs through coxal Excretion occurs through nephridia. (iv) gland on malpighian tubules. (v) Respiration occurs through Respiration occurs through gills. tracheae, gills or book lungs

Ans. Following are the differences between Arthropoda and Mollusca :

Q.13. Write two difference between cartilaginous and bony fishes. [DDE Practice Paper]

OR Write three iamportant features of cartilaginous fish and bony fish. Also give one examples of each of these. [DDE Practice paper]

Ans.

Cartilaginous Fish	Bony Fish
(i) Skin is covered by small placoid scales.	Skin is covered with large cycloid or ganoid
	or ctenoid scales.
(ii) Endoskeleton is cartilaginous	Endoskeleton is partly or wholly bony.
(iii) Tail fin is heterocercal.	Tail fin is homocercal.
(iv) e.g. Sharks, rays.	e.g. Labeo, catla

Q.14. Enumerate the peculiar features that you find in phylum Chordata. [DDE Practice Paper]

Ans. features of Chordates are as follows :

- (i) Notochord is present.
- (ii) A hollow tube like structure called dorsal nerve cord is present.
- (iii) Pharynx perforated by gill slits.
- (iv) Post-anal tail is present.

Q.15. Write the main characteristics of Chondrichthyes.

Ans. Class-Chondrichthyes :

- (i) Chondrichthyes are exclusively marine fishes.
- (ii) They have cartilaginous endoskeleton. Their body is streamlined.
- (iii) Mouth is located on ventral side.
- (iv) Gill slits are separate and without gill cover (operculum).
- (v) Pelvic fins bear claspers in males.
- (vi) Skin is tough. It has minute placoid scales.
- (vii) Animals are predatory. They have powerful jaws with teeth e.g., sharks, rays, skates etc.

Q.16. which features make reptiles successful on land ?

Ans. Four features that make reptiles true land animals are :

(i) The amnion (embryonic membrane) encloses the embryo and provides it with a watery environment during development, therefore, the embryo does not need watery environment.

(ii) Internal fertilization.

- (iii) Shell around the egg to check desiccation.
- (iv) Horny scales on the body of reptiles check loss of water.

Q.17. Give three basic chordate characters.

Ans. Chief characteristics of the phylum are :

(i) Notochord : A dorsal solid notochord is present throughout life or in larval stages.

(ii) Nerve cord : A dorsal hallow nerve cord is present.

(iii) **Pharyngeal gill slits :** A perforated pharynx is present in young condition or throughout life.

Q.18. Distinguish between a whale and a fish.

Ans.

S.No.	A Whale	A Fish
(i)	Whale is a mammal. The hairs on its	Scales are present over the body of
		lish. It belongs to Fisces.
(ii)	Respires with the help of lungs only.	Respires by means of gills.
(iii)	It is viviparous i.e., give birth to young	It is oviparous i.e., lays eggs.
	ones.	
(iv)	Females have mammary glands.	Mammary glands are absent in them.
(v)	The forelimbs do not have claws and are	Limbs absent. For locomotion, the fins
	flattened and modified into paddle-like	are present.
	flippers. The hindlimbs are absent in	
	whales.	

(Any three)

Q.19. Distinguish between the following by giving one main point :

(i) Worm and Snake.

(ii) Bony fishes and Cartilaginous fishes.

(iii) Ovipary and Vivipary.

Ans. (i) Differences between Worm and Snake :

S.No.	Worm	Snake
(i)	Elongated animals, Scales and shields	Limbs absent. scales and shields are
	absent.	present
(ii)	It includes platyhel minthes, aschel-	They are included in reptilia.
	minthes and annelida worms.	

(ii) Differences between Bony fishes and Cartilaginous fishes :

S.No.	Bony fishes	Cartilaginous fishes
(i)	Endoskeleton is bony.	Endoskeleton is Cartilaginous.

(iii) Differences between Ovipary and Vivipary :

S.No.	Ovipary	Vivipary
(i)	A phenomenon of laying eggs. E.g., Prototheria.	A phenomenon of producing young ones e.g., Eutheria.

Q.20. Mention the behaviour that birds exhibit.

Ans. The birds exhibit following behaviour :

(i) They produce peculiar sound and communicate with each other by song and bird calls.

(ii) Several species exhibit courtship in the form of mating dance.

(iii) Nest building is peculiar instinct in many birds.

e g, Male weaver and Tailor bird.

(iv) Most of the birds show parental care. The parent guard and sit on the eggs till they are hatch and look after their young ones till they get independent.

(v) Bird migration is another surprising behaviour. (Any three)

Q.21. Difference between turtle and tortoise. [Most Imp.]

Ans.

S.No.	Turtle	Tortoise
(i)	Marine form.	Fresh water and terrestrial form.
(ii)	Diennual shell, ovoid with well	The shell has no horny scales but a
	developed horny scales.	covering of soft skin.
(iii)	Limbs modified into paddles.	Limbs bears digits and claws adapted for
		walking on land.