1. What are the difficulties that you would face in classification of animals, if common fundamental features are not taken into account?

Ans. If fundamental characters are not taken into account, then the classification of animals is difficult due to difference in characters in different animals which are as:

  (i) Grade of organisation   (ii) Symmetry

  (iii) Coelom   (iv) Segmentation

  (v) Notochord

2. If you are given a specimen, what are the steps that you would follow to classify it?

Ans. Classification of specimen deals according to a systematic plan on the basis of their similarities, differences and relationship. Stepwise, this study is in following order: morphology, cytology, embryology, ecological relationship, genetics and biochemistry.

We will take following steps:

  (i) Level or grade of organisation

  (ii) Pattern in organ system

  (iii) Symmetry

  (iv) Diploblastic and triploblastic organisation

  (v) Body cavity and coelom

  (vi) Segmentation

3. How useful is the study of the nature of body cavity and coelom in the classification of animals?

Ans. Coelom is the gap between gut and body wall. Coelom is the characterstic feature of complex or higher animals while lower animals like platyhelminthes are acoelomate. So the coelom characterise to the complexity of the animals and represent to organic evolution.

4. Distinguish between intracellular and extracellular digestion?

Ans. Intracellular digestion takes place inside the cells by cellular enzymes whereas extracellular digestion occurs with the help of digestive enzymes poured into gastrovascular cavity by secretary cells.

5. What is the difference between direct and indirect development?

Ans. In direct development, young ones are formed directly from development of zygote while in indirect development, young ones are formed through an intermediate stage i.e. larval stage.

6. What are the peculiar features that you find in parasitic Platyhelminthes?

Ans. (i) These are mostly endoparasites of animals including human.

(ii) Hook and suckers are present for attachment to host body.

(iii) They absorb nutrient from the host directly through their body surface.

7. What are the reasons that you can think of for the arthropods to constitute the largest group of the animal kingdom?

Ans. Arthropods are the most successful group of animals. Their success is due to

(i) Unique chitinous cuticle

(ii) Light weight exoskeleton

(iii) Omnivorous habit

(iv) Mouth parts are adapted to various mode of feeding

(v) They are adapted for different climatic conditions.

8. Water vascular system is the characteristic of which group of the following:

(a) Porifera   (b) Ctenophora

(c) Echinodermata   (d) Chordata

Ans. Echinodermata

9. "All vertebrates are chordates but all chordates are not vertebrates". Justify the statement.

Ans. Phylum chordates includes two subphyla:

(i) Protochordates   (ii) Vertebrates

This confirms that all vertebrates are chordates but all chordates are not vertebrates, they may be protochordate.

10. How important is the presence of air bladder in Pisces?

Ans. Air bladder is a hydrostatic organ which regulates byoyancy. It also aids in swimming by reducing the weight of body.

11. What are the modifications that are observed in birds that help them fly?

Ans. The birds are adopted for flying by reducing the weight and other modifications which are as follows:

(i) The forelimb modified into wings   (ii) Left ovary absent

(iii) Presence of pneumatic bones

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

Ans. The eggs given by egg-laying animals and young ones given by viviparous

animals are not equal because the egg-laying animals lay more eggs to resist the environmental forces so that the population remain constant or not declining while the viviporous animals nurture their young ones and give birth to less number of off-springs.

13. Segmentation in the body is first observed in which of the following:

    (a) Platyhelminthes   (b) Aschelminthes

    (c) Annelida   (d) Arthropoda

Ans.   (c) Annelida.

14. Match the following:

(i)	Operculum	(a)	Ctenophora
(ii)	Parapodia	(b)	Mollusca
(iii)	Scales	(c)	Porifera
(iv)	Comb plates	(d)	Reptilia
(v)	Radula	(e)	Annelida
(vi)	Hairs	(f)	Cyclostomata and Chondrichthyes
(vii)	Choanocytes	(g)	Mammalia
(viii)	Gill slits	(h)	Osteichthyes

Ans.

(a)	Operculum	(viii)	Ostecthyes
(b)	Parapodia	(v)	Annelida
(c)	Scales	(iv)	Reptilia
(d)	Comb plates	(v)	Ctenophora
(e)	Radula	(ii)	Mollusca
(f)	Hairs	(vii)	Mammalia
(g)	Choanocytes	(iii)	Porifera
(h)	Gill slits	(v)	Cyclostomata and chondrichythes

15. Prepare a list of some animals that are found parasitic on human beings.

Ans.

(i)	Taenia solium	(v)	Enbtobius
(ii)	Ascaris	(vi)	Female anopheles
(iii)	Wucheria	(vii)	Female aedes
(iv)	Ancyclostoma	(viii)	Julus