

INTRODUCTION TO ANIMAL **KINGDOM**



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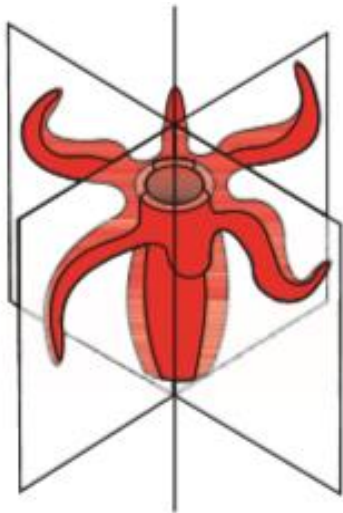


Figure 4.1 (a) Radial symmetry

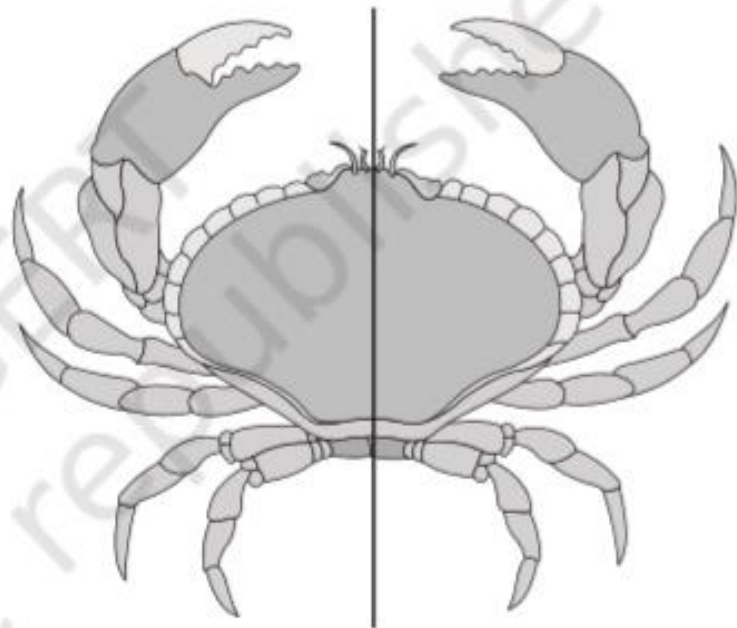


Figure 4.1 (b) Bilateral symmetry

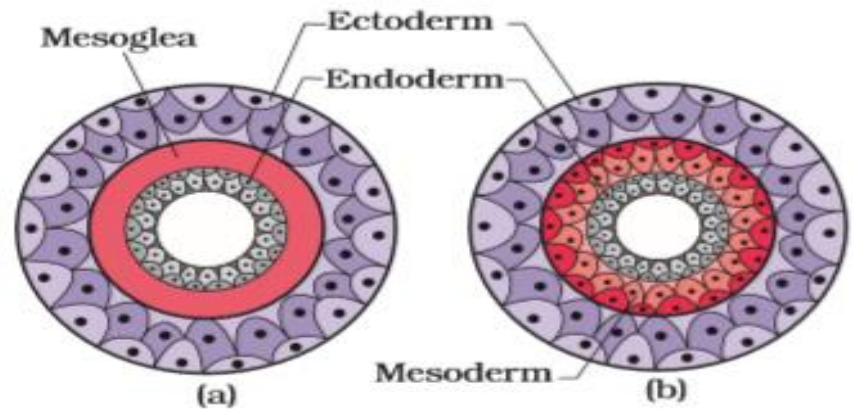


Figure 4.2 Showing germinal layers :
(a) Diploblastic (b) Triploblastic

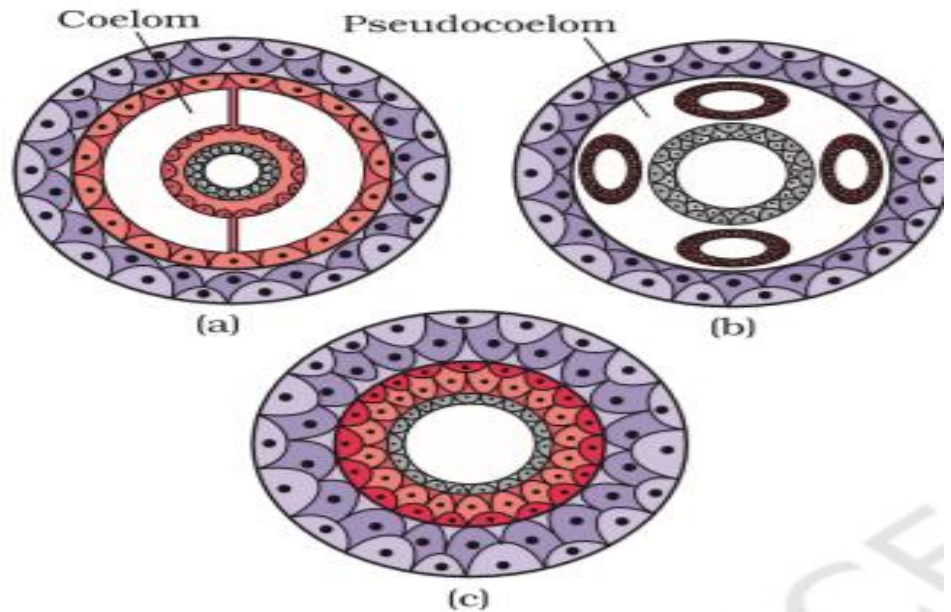
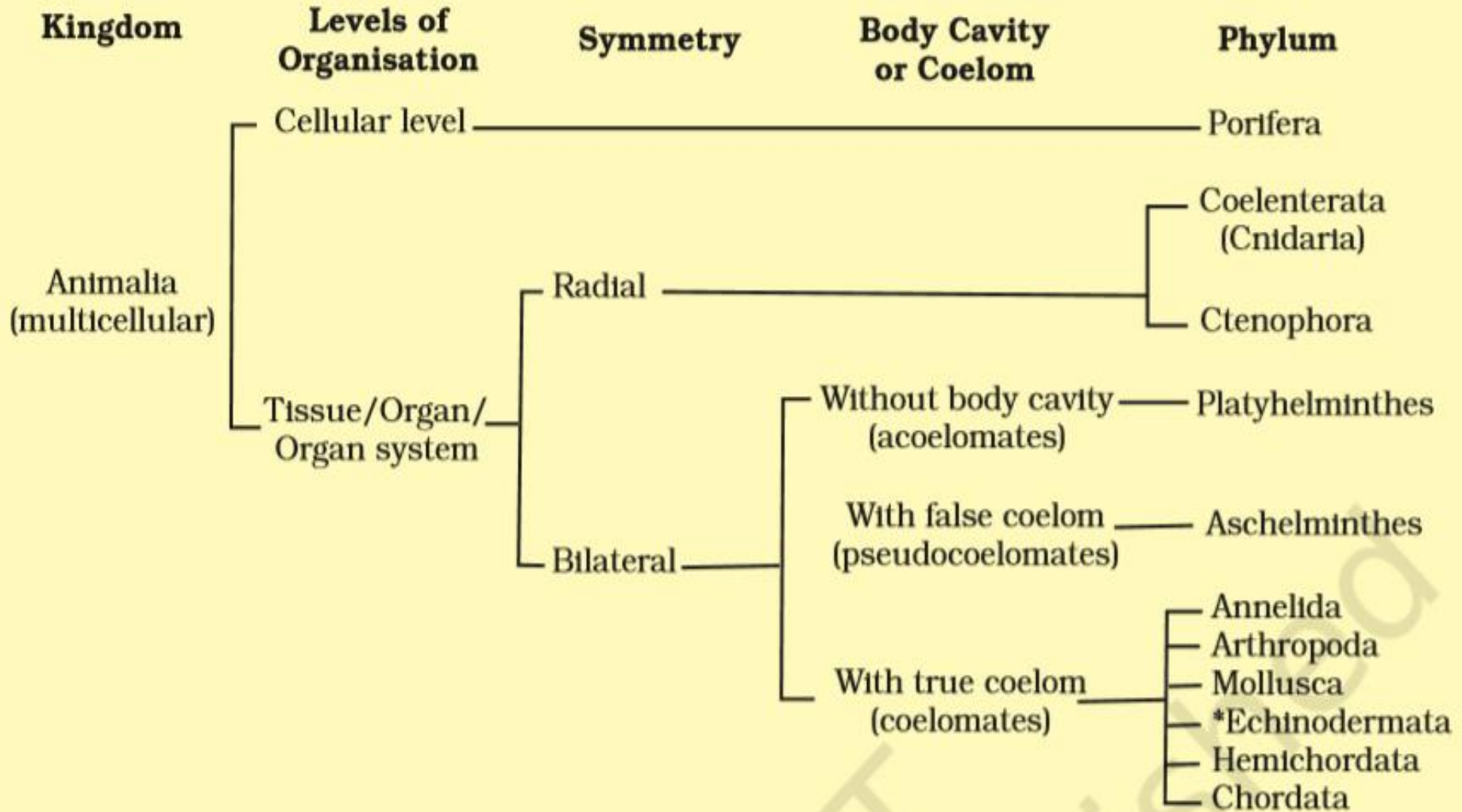


Figure 4.3 Diagrammatic sectional view of :
(a) Coelomate (b) Pseudocoelomate
(c) Acoelomate

CLASSIFICATION OF ANIMAL KINGDOM



*Echinodermata exhibits radial or bilateral symmetry depending on the stage.

PHYLUM : PORIFERA

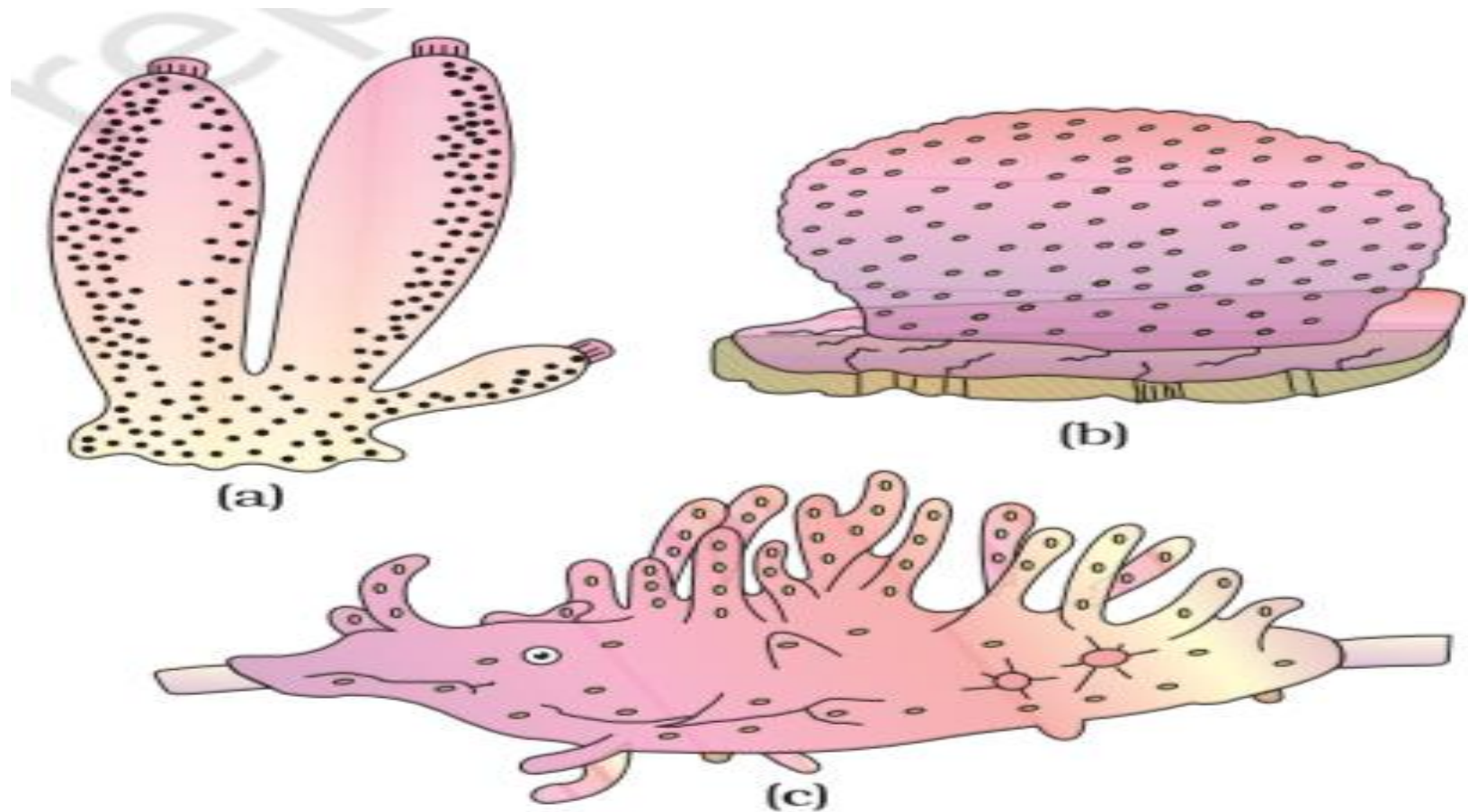
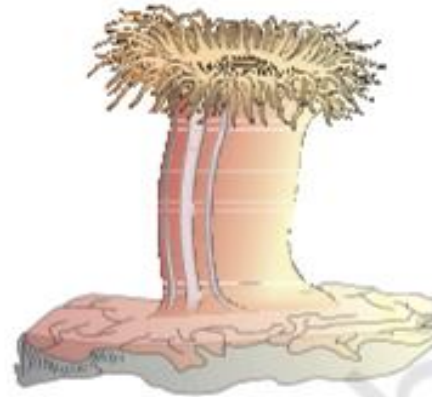


Figure 4.5 Examples of Porifera : (a) *Sycon*
(b) *Euspongia* (c) *Spongilla*

PHYLUM : COELENTERATA



(a)



(b)

Figure 4.6 Examples of Coelenterata indicating outline of their body form :
(a) *Aurelia* (Medusa) (b) *Adamsia* (Polyp)

PHYLUM : PLATYHELMINTHES

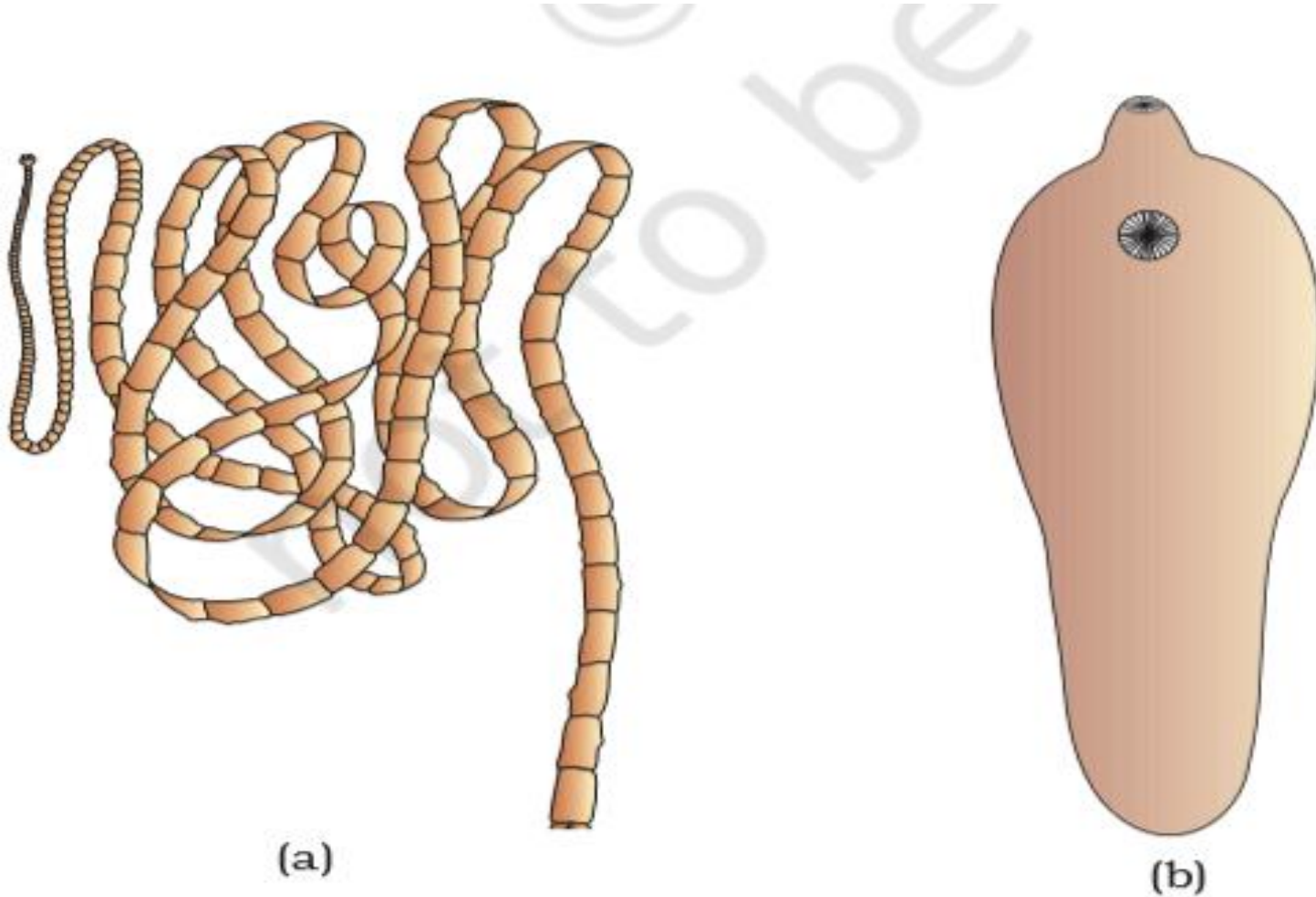


Figure 4.9 Examples of Platyhelminthes : (a) Tape worm (b) Liver fluke

PHYLUM : ASCHELMINTHES



Male

Female

Figure 4.10 Aschelminthes
- Roundworm

PHYLUM : ANNELIDA



Figure 4.11 Examples of Annelida : (a) *Nereis*
(b) *Hirudinaria*

PHYLUM : ARTHROPODA



(a)



(b)



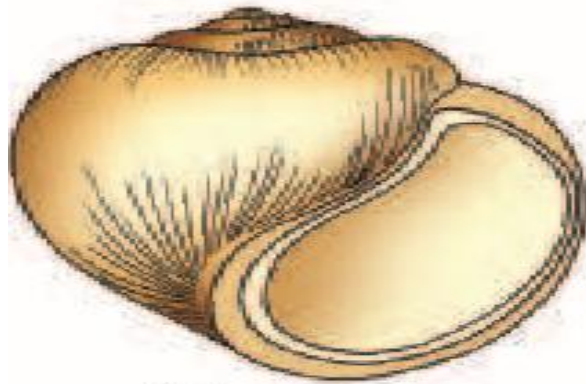
(c)



(d)

Figure 4.12 Examples of Arthropoda :
(a) Locust (b) Butterfly
(c) Scorpion (d) Prawn

PHYLUM : MOLLUSCA



(a)



(b)

figure 4.13 Examples of Mollusca :
(a) *Pila* (b) *Octopus*

PHYLUM : ECHINODERMATA

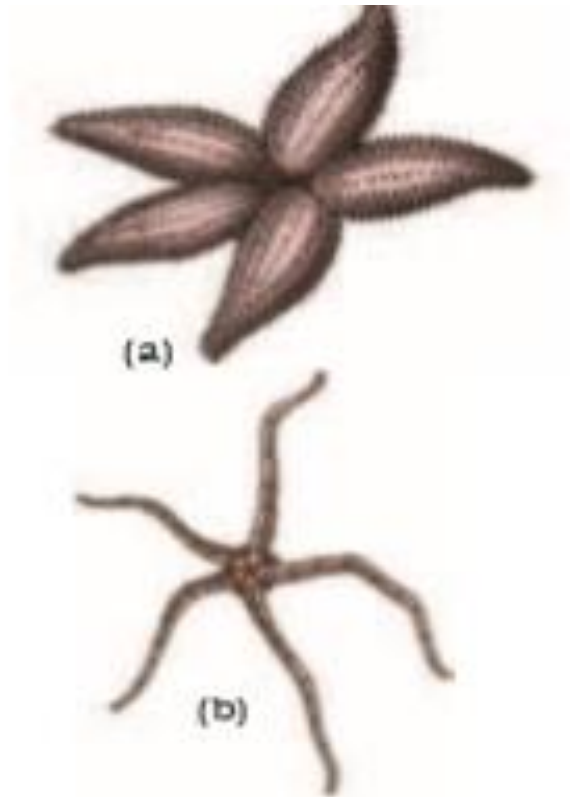


Figure 4.14 Examples of Echinodermata :
(a) *Asterias*
(b) *Ophiura*



Figure 4.15 *Balanoglossus*

PHYLUM : CHORDATA

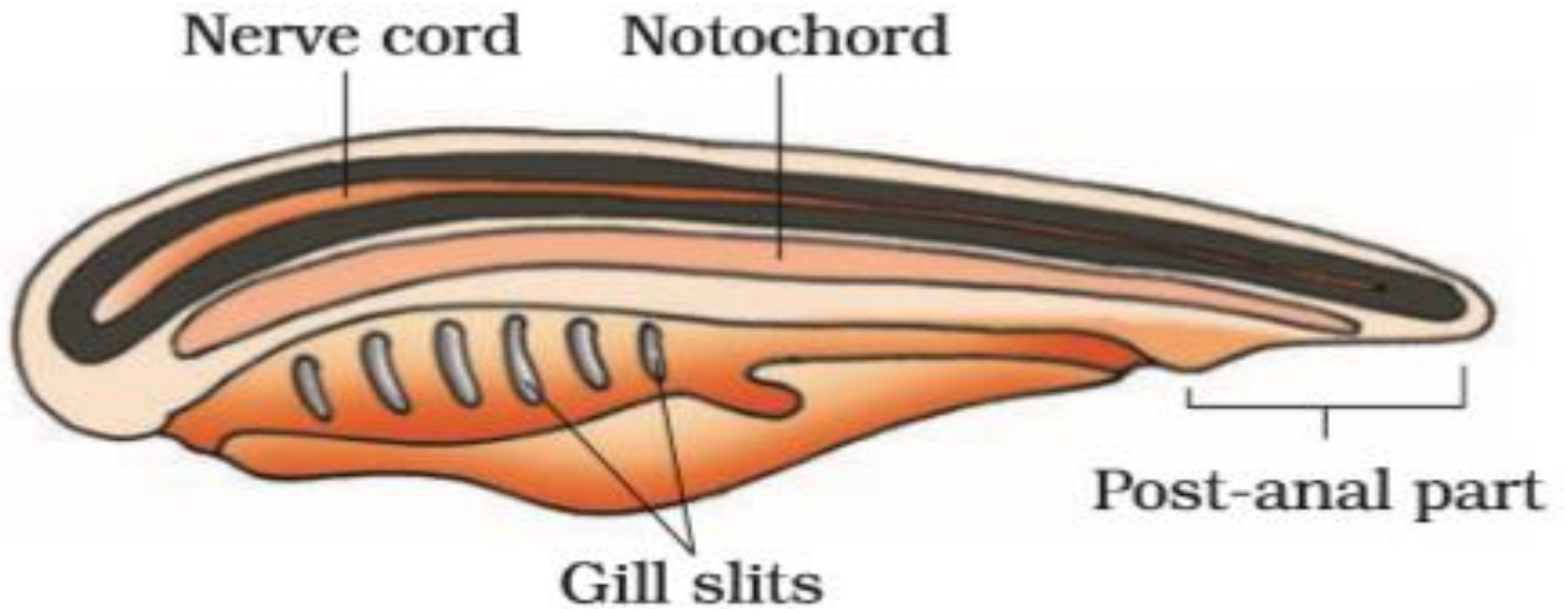


Figure 4.16 Chordata characteristics

SUMMARY

Phylum	Level of Organisation	Symmetry	Coelom	Segmentation	Digestive System	Circulatory System	Respiratory System	Distinctive Features
Porifera	Cellular	Various	Absent	Absent	Absent	Absent	Absent	Body with pores and canals in walls.
Coelenterata (Cnidaria)	Tissue	Radial	Absent	Absent	Incomplete	Absent	Absent	Cnidoblasts present.
Ctenophora	Tissue	Radial	Absent	Absent	Incomplete	Absent	Absent	Comb plates for locomotion.
Platyhelminthes	Organ & Organ-system	Bilateral	Absent	Absent	Incomplete	Absent	Absent	Flat body, suckers.
Aschelminthes	Organ-system	Bilateral	Pseudo coelomate	Absent	Complete	Absent	Absent	Often worm-shaped, elongated.
Annelida	Organ-system	Bilateral	Coelomate	Present	Complete	Present	Absent	Body segmentation like rings.
Arthropoda	Organ-system	Bilateral	Coelomate	Present	Complete	Present	Present	Exoskeleton of cuticle, jointed appendages.
Mollusca	Organ-system	Bilateral	Coelomate	Absent	Complete	Present	Present	External skeleton of shell usually present.
Echinodermata	Organ-system	Radial	Coelomate	Absent	Complete	Present	Present	Water vascular system, radial symmetry.
Hemichordata	Organ-system	Bilateral	Coelomate	Absent	Complete	Present	Present	Worm-like with proboscis, collar and trunk.
Chordata	Organ-system	Bilateral	Coelomate	Present	Complete	Present	Present	Notochord, dorsal hollow nerve cord, gill slits with limbs or fins.