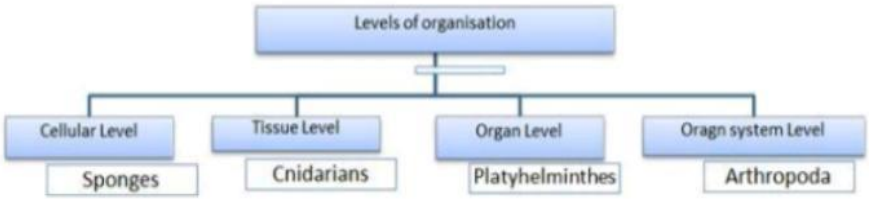
ANIMAL KINGDOM

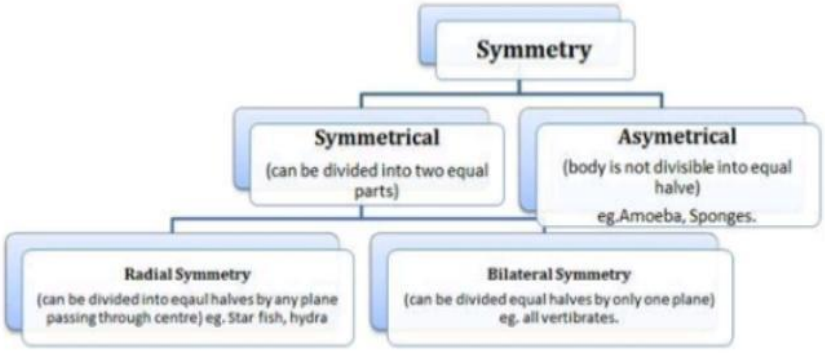
CHAPTER 4

PART 1

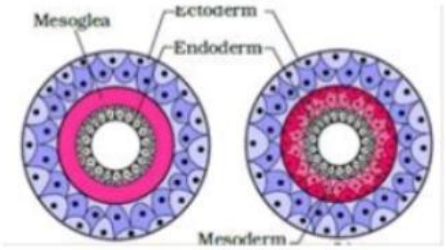
- Millions of species of animals have been described and it becomes more necessary to classify them to assign a systematic position.
- Animals are classified on the basis of arrangement of cells, body symmetry, nature of coelom, pattern of digestive, circulatory and reproductive system.



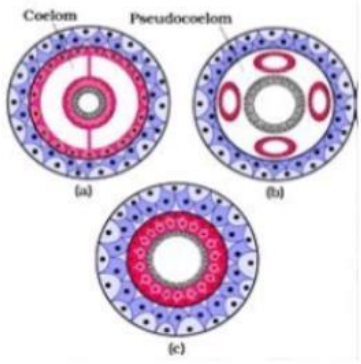
- Incomplete digestive system has one opening but complete digestive system has two opening- mouth and anus.
- Open circulatory system- blood is pumped out of heart and cells and tissue are directly bathed in it.
- Closed circulatory system- blood is circulated through arteries, veins and capillaries.



- The animals in which cells are arranged in two embryonic layer, external ectoderm and internal endoderm are called **diploblastic**. Eg. Porifera and Cnidaria.



- The animals in which developing embryo has a third germinal layer, mesoderm besides ectoderm and endoderm are called triploblastic. Eg. Platyhelminthes, Chordates.
- The body cavity which is lined by mesoderm is called coelom. Animals possessing coelom are called **coelomate** (Annelida, Chordates, Mollusca). In some animals cavity is not lined by mesoderm but scattered as pouches in between ectoderm and endoderm, are called **pseudo-coelomates** (Aschelminthes). The animals in which body cavity is absent are called **acoelomate** (Platyhelminthes).



- In some animals, body is externally and internally divided into segments with serial repetition as in earthworm, called metameric segmentation.

CLASSIFICATION OF ANIMALS

Phylum Porifera-

- Members of this phylum are commonly known as sponges. Mostly marine, asymmetrical and have cellular level of organization.
- They have water transport or canal system. Water enters through minute pores, **Ostia** into central cavity **Spongocoel**, from where it goes out through **Osculum**.