

NCERT SOLUTIONS CLASS-XI BIOLOGY

CHAPTER-4 ANIMAL KINGDOM

Q1: What are the difficulties that you would face in classification of animals, if common fundamental features are not taken into account?

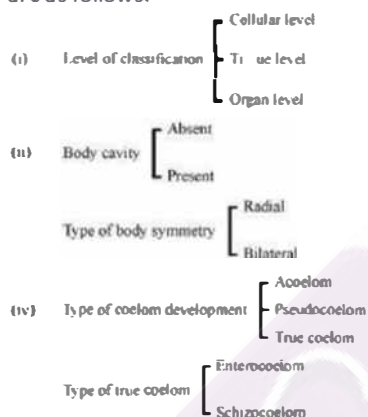
Answer: For the classification of living organisms, common fundamental characteristics are considered.

If we consider specific characteristics, then each organism will be placed in a separate group and the entire objective of classification would not be achieved.

Classification of animals is also important in comparing different organisms and judging their individual evolutionary significance. If only a single characteristic is considered, then this objective would not be achieved.

Q2: If you are given a specimen, what are the steps that you would follow to classify it?

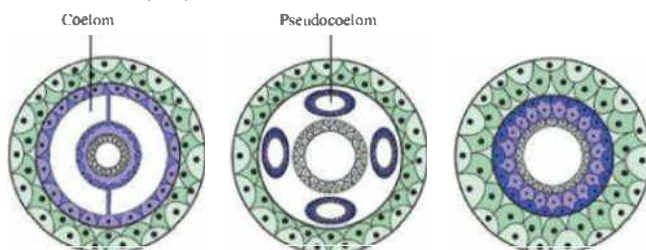
Answer: There is a certain common fundamental feature that helps in classification of living organisms. The features that can be used in classification are as follows.



On the basis of above features, we can easily classify a specimen into its respective category.

Q3: How useful is the study of the nature of body cavity and coelom in the classification of animals?

Answer: Coelom is a fluid filled space between the body wall and digestive tract. The presence or absence of body cavity or coelom plays a very important role in the classification of animals. Animals that possess a fluid filled cavity between body wall and digestive tract are known as coelomates. Annelids, mollusks, arthropods, echinoderms, and chordates are examples of coelomates. On the other hand, the animals in which the body cavity is not lined by mesoderm are known as pseudocoelomates. In such animals, mesoderm is scattered in between ectoderm and endoderm. Aschelminthes is an example of pseudocoelomates. In certain animals, the body cavity is absent. They are known as acoelomates. An example of acoelomates is platyhelminthes.



Q4: Distinguish between intracellular and extracellular digestion?

Answer:

Intracellular digestion	Extracellular digestion
1. The digestion of food occurs within the cell.	1. The digestion occurs in the cavity of alimentary canal
2. Digestive enzymes are secreted by the surrounding cytoplasm into the food vacuole.	2. Digestive enzymes are secreted by special cells 2. Into the cavity of alimentary canal.
3. Digestive products are diffused into the cytoplasm.	3. Digestive products diffuse across the intestinal wall into various parts of the body.
4. It is a less efficient method.	4. It is a more efficient method of digestion.