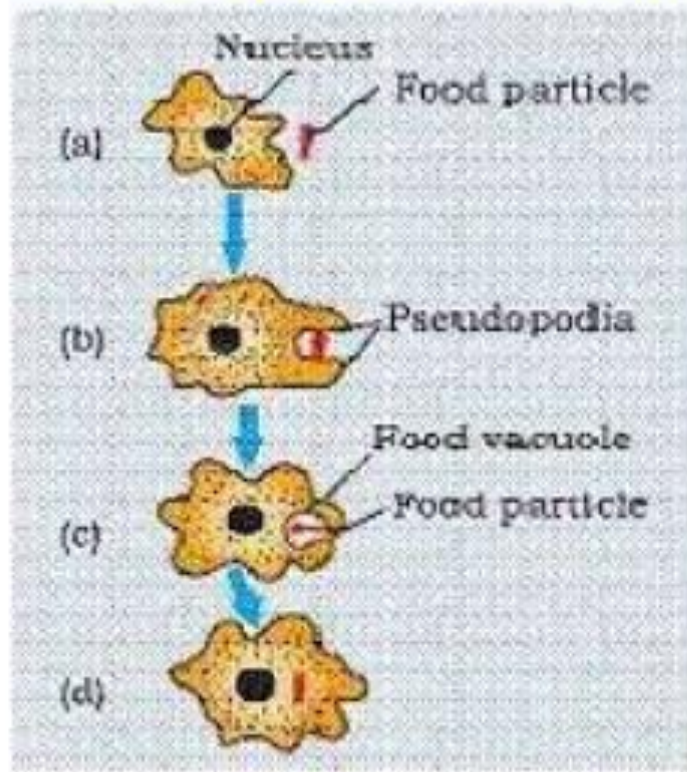


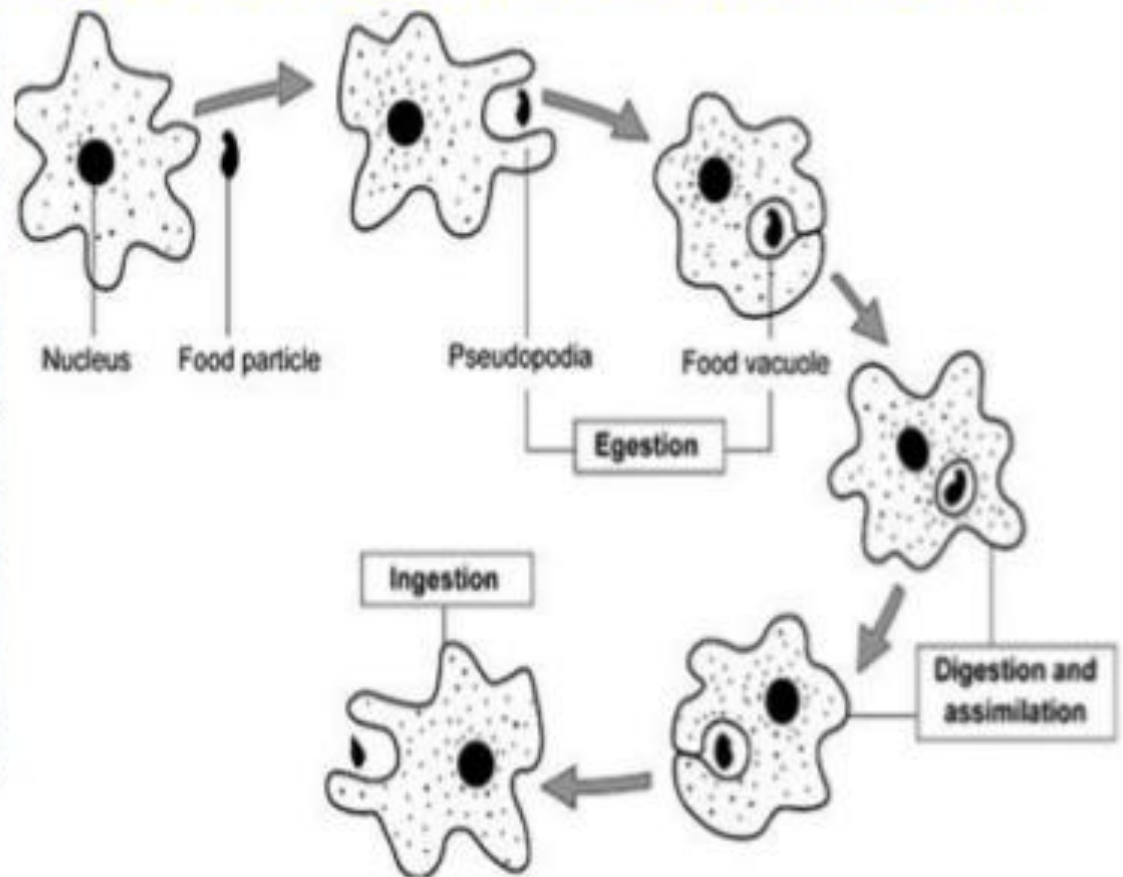
6) Nutrition in animals :-

• a) Nutrition in amoeba :-

• Amoeba is a unicellular animal living in water. It takes in food by forming finger like projections called pseudopodia and forms a food vacuole. Inside the food vacuole the food is digested and absorbed. The undigested food is then sent out through the surface of the cell.



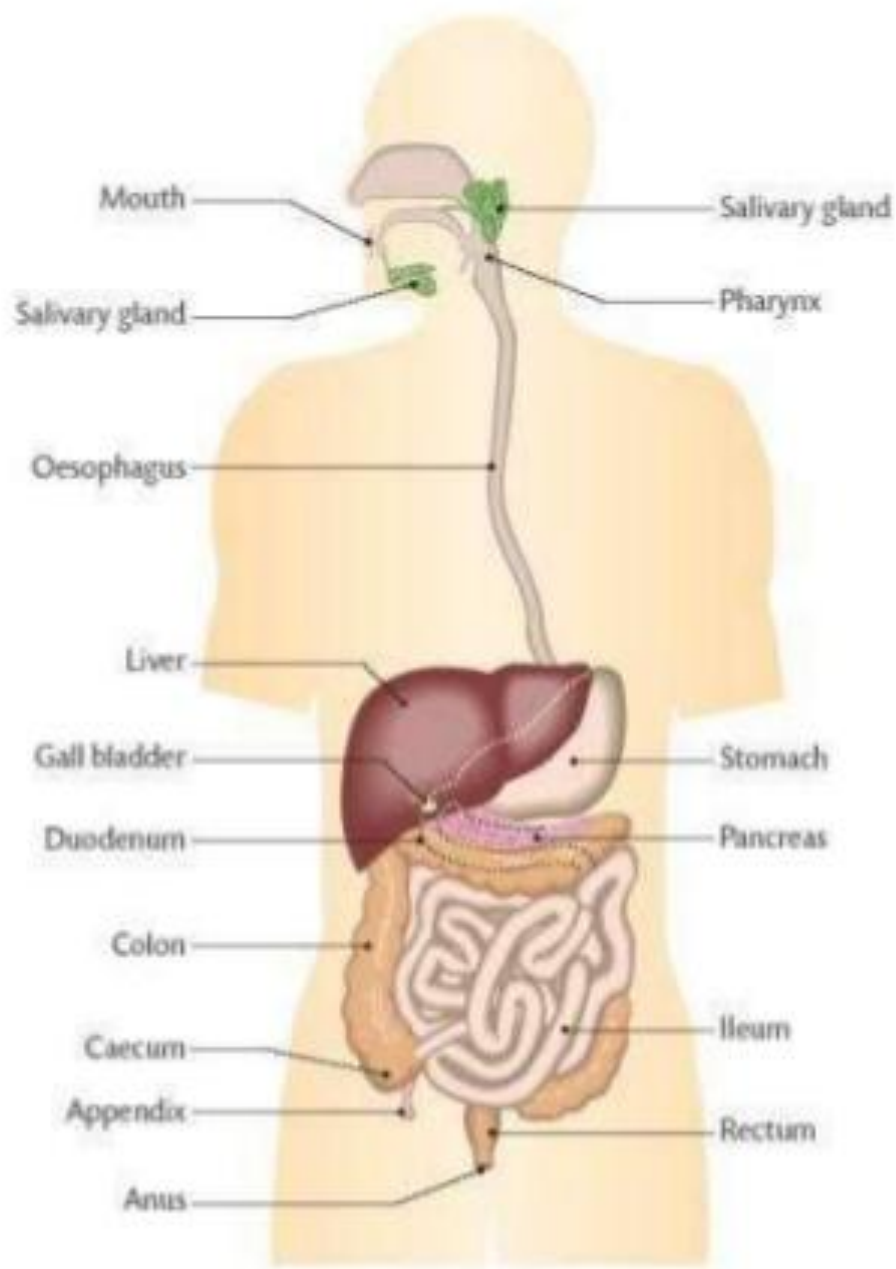
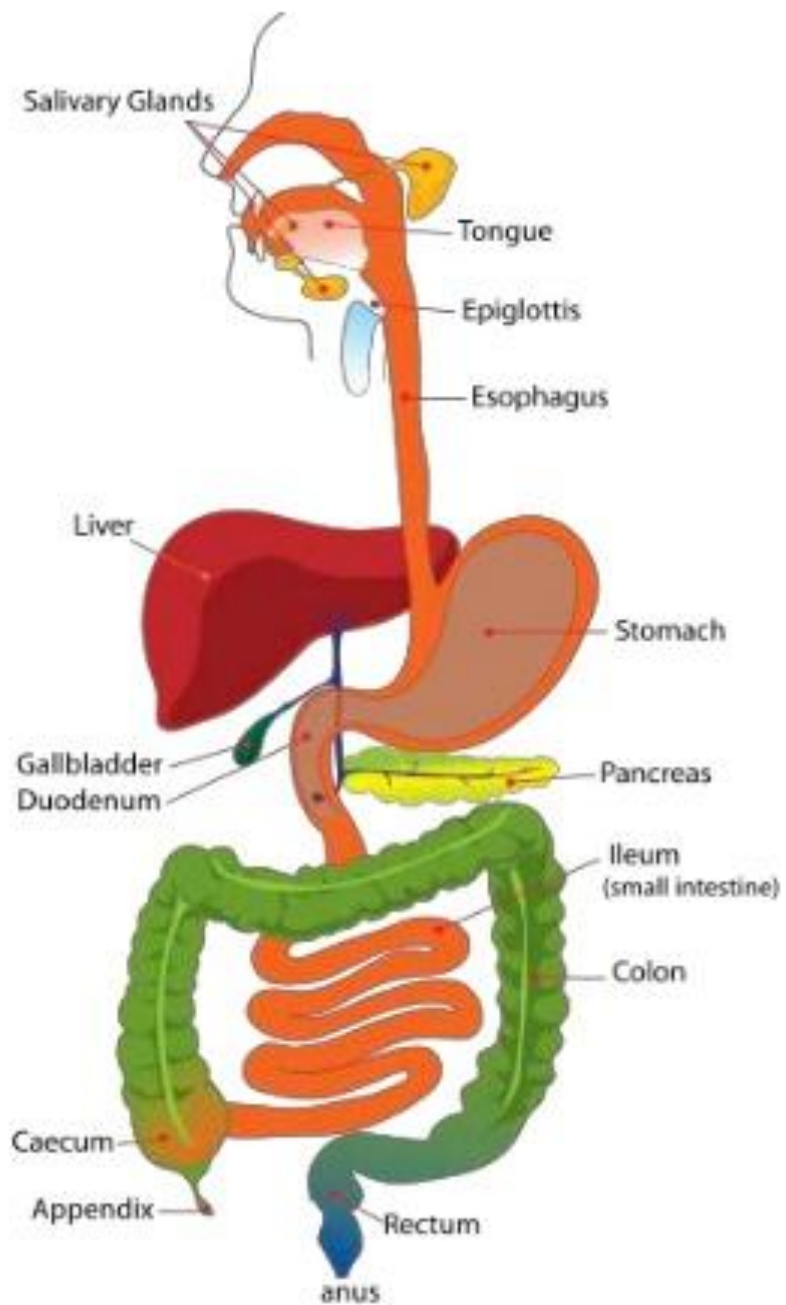
Nutrition in Amoeba



Nutrition in Amoeba

b) Nutrition in Human beings :-

- Nutrition in human beings takes place in the digestive system. It consists of the alimentary canal and glands which produce enzymes which breaks down food into smaller molecules.
- The main organs of the digestive system are mouth, oesophagus, stomach, small intestine, large intestine, and anus. The main glands are salivary glands, gastric glands, liver, pancreas and intestinal glands.



- In the mouth :- the food is broken down into smaller particles by the teeth and mixed with saliva from the salivary glands. Saliva contains the enzyme salivary amylase which converts starch into sugar. Then the food passes through the oesophagus into the stomach.
- In the stomach :- the gastric glands produce gastric juice which contains the enzyme pepsin, hydrochloric acid and mucous. Pepsin breaks down proteins. Hydrochloric acid makes the medium acidic and helps in the action of pepsin. Mucous protects the walls of the stomach from the action of the acid. Then the food passes into the small intestine.

- In the upper part of the small intestine called duodenum :- the food is mixed with bile from liver and pancreatic juice from the pancreas. Bile breaks down fats into smaller globules. Pancreatic juice contains the enzymes trypsin and lipase. Trypsin breaks down proteins and lipase breaks down fats.
- In the small intestine :- the glands the walls of the small intestine produces intestinal juice. The enzymes of the intestinal juice converts carbohydrates into glucose, fats into fatty acids and glycerol and proteins into amino acids. The walls of the small intestine has several finger like projections called villi having blood vessels. It helps to increase the surface area for the absorption of digested food. The digested food is absorbed by the blood and transported to all cells in the body. Then the undigested food passes into the large intestine.
- In the large intestine :- water is absorbed and the waste material is removed through the anus.