

5. How are fats digested in our bodies? Where does this process take place?

Ans Fats are digested in our body in the small intestine. Fats entering the small intestine are in the form of large globules. The digestion of fats completes in the following steps:-

- a) Bile salts break large globules into small globules.
- b) Pancreatic juice secreted by pancreas has enzyme lipase which breaks down emulsified fats.
- c) Enzymes secreted from the walls of small intestine finally converts fats into fatty acids.

6. What is the role of saliva in the digestion of food?

Ans Saliva contains water, salts, mucin and an enzyme salivary amylase that breaks down starch present in food into sugar.

7. What are the necessary conditions for autotrophic nutrition and what are its products?

Ans The necessary conditions for autotrophic nutrition are as follows:-

- i) CO_2 is necessary for photosynthesis.
 - ii) Water is required.
 - iii) Sunlight is necessary for photosynthesis.
 - iv) Chlorophyll is also essential for photosynthesis.
- Oxygen is liberated as by-product.

8. What are the differences between aerobic and anaerobic respiration? Name the organisms that use anaerobic mode of respiration.

Ans Anaerobic mode of respiration occurs in some organisms like Bacteria and Yeast.

Aerobic Respiration

a) When oxidation of food nutrients occurs in the presence of molecular oxygen.

b) More energy is produced as oxidation is complete.

c) Takes place in cytoplasm and mitochondria.

Anaerobic Respiration

a) When oxidation of food occurs without the presence of molecular oxygen.

b) Less energy is produced as oxidation is not complete.

c) Takes place in the cytoplasm.

9. How are alveoli designed to maximise the exchange of gases?

ans In human beings, to maximise the area for exchange of gases, inner surface of lungs has smaller tubes that terminate into balloon like structures called alveoli. The walls of alveoli have extensive network of blood vessels.

10. What would be the consequences of a deficiency of haemoglobin in our bodies?

Ans Deficiency of haemoglobin in our bodies will affect the supply of oxygen to tissues and cells because haemoglobin is the carrier of oxygen. Thus, a person shows symptoms of breathlessness, tiredness with indications of iron deficiency i.e. anaemia.