

Science

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(Chapter 6)(Life Processes)

Class - 10

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Question 1:

What are the differences between autotrophic nutrition and heterotrophic nutrition?

Answer 1:

<i>Autotrophic nutrition</i>		<i>Heterotrophic nutrition</i>	
1.	Food is synthesised from simple inorganic raw materials such as CO ₂ and water.	1.	Food is obtained directly or indirectly from autotrophs. This food is broken down with the help of enzymes.
2.	Presence of green pigment (chlorophyll) is necessary.	2.	No pigment is required in this type of nutrition.
3.	Food is generally prepared during day time.	3.	Food can be prepared at all times.
4.	All green plants and some bacteria have this type of nutrition.	4.	All animals and fungi have this type of nutrition.

Question 2:

Where do plants get each of the raw materials required for photosynthesis?

Answer 2:

The following raw materials are required for photosynthesis:

- The raw material CO₂ enters from the atmosphere through stomata.
- Water is absorbed from the soil by the plant roots.
- Sunlight, an important component to manufacture food, is absorbed by the chlorophyll and other green parts of the plants.

Question 3:

What is the role of the acid in our stomach?

Answer 3:

Role of the acid (HCl) in our stomach:

- Kills germs present in the food.
- Makes the food acidic, so that pepsin can digest protein.

Question 4:

What is the function of digestive enzymes?

Answer 4:

Digestive enzymes such as amylase, lipase, pepsin, trypsin, etc. help in the breaking down of complex food particles into simple ones. These simple particles can be easily absorbed by the blood and thus transported to all the cells of the body.

Question 5:

How is the small intestine designed to absorb digested food?

Answer 5:

The small intestine has millions of tiny finger-like projections called villi. These villi increase the surface area for food absorption. Within these villi, many blood vessels are present that absorb the digested food and carry it to the blood stream. From the blood stream, the absorbed food is delivered to each and every cell of the body.