

Class - Xth

Ch - Life Process

(Exercise - Qns & Ans),

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Qns :- Why is diffusion insufficient to meet the oxygen requirement of multicellular organisms like us?

Ans! -> The living cells of Human beings and other multicellular organisms are not in contact with external environment. Diffusion is very slow process, it cannot pass oxygen every cell through small openings (Pores of cell membrane). Passage of O_2 from lungs to toes through cell to cell diffusion will take about three years.

Qns! -> What criteria do we decide whether something is alive?

Ans! -> The major criterion which is used to decide whether something is alive is Movement :-

(i) Locomotion
(ii) Movement of Molecules

Other criteria :-

(i) Growth (ii) Response towards stimuli
(iii) Reproduction (iv) definite life span.

Qns! -> What are raw materials used by an organism?

Ans! -> Plants \rightarrow CO_2 , minerals and water & O_2
Heterotrophic \rightarrow Food, O_2 and water.
organisms

Qns! -> What processes would you consider essential for maintaining life?

Ans! -> Essential life processes are :-

Nutrition, Respiration, Transportation and Excretion.

Qns! -> Where does the plant get each of the raw materials for photosynthesis?

Ans! - (i) Carbon dioxide \rightarrow Air through stomata.

(ii) water \rightarrow Soil through roots.

(iii) Minerals \rightarrow Soil through roots.

Qn! - What is the role of acid in our stomach?

Ans! - Hydrochloric Acid (HCl) is one component of gastric acid. This acid performs many roles: -

(i) Softening of food

(ii) Killing of microbes present in food.

(iii) makes medium for digestion of protein

Qn! - What is the function of digestive enzymes?

Ans! - Digestive enzymes are hydrolytic enzymes which are involved in breaking of complex organic substances into simple soluble and absorbable forms.

Qn! - How is the small intestine designed to absorb digested food.

Ans! - Small intestine has many transverse folds (finger like outgrowth) which are called villi. These villi are provided with blood capillaries in which digested food is absorbed into blood. Villi increase the surface area for absorption of food.

Qn! - What advantage does a terrestrial organism possess over aquatic organism with regard to obtain oxygen for respiration?

Ans! - Air contains about 21% of oxygen while water has less than 1% oxygen dissolved state. Terrestrial organism is able to get several times more oxygen than an aquatic organism.