

Question & Answer of ch-1

1. Why is diffusion insufficient to meet the oxygen requirement organisms like humans?

The oxygen of air will have to travel large distances inside the human body to reach each & every cell of the body. Since diffusion is insufficient to meet oxygen requirement.

2. What criteria do we use to decide whether an organism is alive?

- i) Movement.
- ii) Growth
- iii) Sensitivity
- iv) Reproduction.
- v) Respire
- vi) Excrete
- vii) Nutrition.

3. What are the outside raw materials used by an organism?

- i) Autotrophic organism uses raw materials such as CO_2 , H_2O & (Sunlight ect.
- ii) Heterotrophic organisms use proteins & other substances.

4. What processes would you consider essential for maintaining life?

A- Nutrition; Respiration; Transport; Excretion; Control & coordination; Growth; Movement & Reproduction.

1. Difference between autotrophic & heterotrophic?

i) Autotrophic → Make their own food.

heterotrophic → cannot make their own food

2. Where do plants get each of the raw materials require for photosynthesis?

A→ CO_2 & water.

3. What is the role of the acid in our stomach?

A→ The role of acid in our stomach is to make the medium of gastric juice so that the enzyme pepsin can break down proteins of the food effectively.

4. What is the function of digestive enzymes?
It breaks down the complex food molecules into such small particles which can be absorbed from the alimentary canal into the blood stream.

5. How is the small intestine designed to absorb digested food?

It contains small finger like projection which digests the food. It has very large surface area. It helps for rapid absorption.

1. What advantage over an aquatic organism does a terrestrial organisms does ~~it~~ have oxygen?

The aquatic organisms uses the dissolved oxygen in water for carrying out respiration.

2. What are the different ways in which glucose is oxidised to provide energy?

- i) Aerobic
- ii) Anerobic

3. How are oxygen & CO₂ transported in human beings?

Oxygen is carried out by the respiratory pigment hemoglobin. Carbon dioxide is more soluble in water than oxygen & carried by the blood.

4. In human; a pair of lungs are designed in such a way that they are lined by a thin membrane. The smaller tubes called bronchioles & balloon like structure called alveoli and a network of blood capillaries increase the surface area for the exchange of gases.

5. What advantages over an aquatic organism does a terrestrial organisms have with regards?

A. A terrestrial organism produce or move faster as it get sufficient amount of oxygen rather than aquatic organism.

6. To support the trachea but also allow it to move and flex when a person breaths.

6. What is the role of saliva? ~~contains~~
~~an enzyme called salivary~~

Saliva contain an enzyme called salivary amylases. The enzyme salivary amylase present in saliva breaks down the complex 'starch' carbohydrate present in food into a simpler sugar.

7. CO_2 ; Water; Sunlight; Chlorophyll.
Its by products are glucose & carbohydrate.

8. by Yeast & some bacteria.

9. There are millions of alveoli are present in the lungs provide a very large area for the exchange of gas.

10. The oxygen required for breathing and is carried by haemoglobin.