

Answer 7

(a)

(i) Significance of studying biology:

1. Studying biology helps us to understand the interdependence of plants, animals and other natural resources. Hence the importance of their conservation.
2. It helps us to understand the causes, transmission, treatment, prevention of diseases which helps us to take proper care of health.
3. Studying features of different plants and animals help us to create new varieties of plants and new breeds of animals. This gives us quality food.
4. Studying biology helps to gather information about different species of plants and animals.

(ii) Preparation of yoghurt:

The pasteurized milk is mixed with *Lactobacillus* bacterium and the mixture is kept at 45°C. The bacterium ferments the lactose present in milk into lactic acid, thereby helping in the curdling of milk. Fruit pulp, fruit juices, etc. are then added to the curd to make yoghurt.

(b)

- (i) The oxygen present in the inhaled air is absorbed into the blood stream to carry out respiration at the cellular level. Hence, the oxygen content of exhaled air has decreased.
- (ii) In exhaled air, the extra carbon dioxide has been produced by the oxidation of glucose in cells. The extra amount of carbon dioxide is given out into the blood which collects in the lungs by the process of diffusion.
- (iii) In exhaled air, the water vapour has come from glucose after its oxidation.
- (iv) Nitrogen is not used in respiration. Therefore, there no change in the percentage of nitrogen.
- (v) During inspiration, the diaphragm flattens to increase the volume of the thoracic cavity so that more inhaled air can be accommodated.