14/5/21

SCIENCE : LIFE PROCESS

Q) In text Q-3, 4, Pg-105

Ans: 3) In human beings, oxygen is carried from the lungs by the respiratory pigment haemoglobin which is present in red blood corpuscles. Haemoglobin has a very high affinity for oxygen. carbondioxide is more soluble in water than oxygen.

4) There are millions of alveoli in the lungs. The presence of millions of alveoli in the lungs provides a very larger ~~area~~ area for the exchange of gases. And the ability of larger surface area maximises the exchange of gases.

Q) What are the different ways in which glucose is oxidised to provide energy in various organism?

Ans: There are two different ways on which glucose is oxidised to provide energy in various organism : aerobic and anaerobic respiration.

(i) In aerobic respiration, the glucose food is completely broken down by the oxygen inhaled during breathing to form CO_2 and H_2O, a lot of energy is released

(ii) In an aerobic respiration, the glucose food is incompletely broken down by the O_2

inhaled during the absence of oxygen to form ethanol and CO_2.

Q) What advantages does a terrestrial organism have with regard to obtaining O_2 for respiration?

Ans The aquatic organisms use the oxygen dissolved in water for carrying out respiration. The amount of O_2 dissolved in water is, however, limited. The terrestrial organism take O_2 from the air which contains higher amount of oxygen. Thus a terrestrial organism has an advantage over an aquatic organism in regard to obtaining oxygen because it is surrounded by an oxygen-rich air from which it can take any amount of O_2.

Q) Why is the trachea provided with cartilaginous rings.

Ans: Trachea is provided with cartilaginous rings because it does not collapse even when there is no air in it because it is supported by rings of soft bone called cartilage.