

Exercise - II

1. Two important processes supported by oxygen present in air:

1. Respiration
2. Combustion

2' (a) Oxygen: Of all the substances necessary for life, air is the most important component. Of all ~~the~~ the components present in air, oxygen is the most vital component which is responsible for two of the most important processes:

1. Respiration
2. Combustion

(b) Nitrogen:

1. Nitrogen dilutes/dilutes the effect of oxygen present in air because it does not support burning.
2. It is used to make fertilizers and various nitrogenous products.

(c) Carbon dioxide:

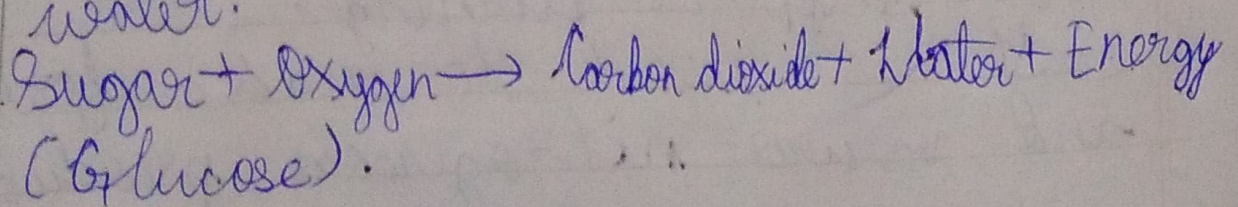
1. Carbon dioxide maintains the temperature

of the Earth and keeps it warm at night.
2. Carbon dioxide being a non-supporter of burning is used as a fire extinguisher.

(d) Water vapour:

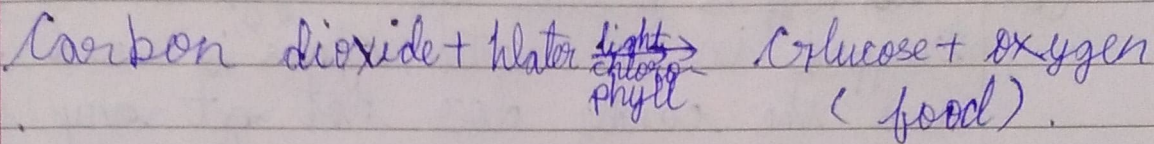
1. Water vapour present in the air provides moisture for both plants and animals.
2. It also helps in predicting climatic conditions of a particular area as its amount varies from place to place and time to time.

3. (a) Respiration is a chemical process that takes place in all living beings. In this process, oxygen present in the inhaled air reacts with the digested food material in the body. This results in the release of energy, carbon dioxide and water.



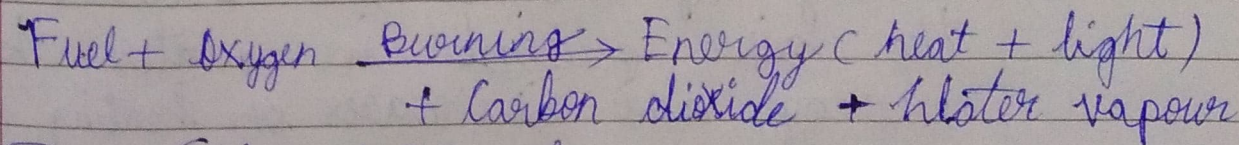
(b) Photosynthesis is a process through which green plants prepare their food in presence

of sunlight with the help of carbon dioxide and water. The food is prepared in the form of glucose with the release of oxygen gas.



(c) Burning or combustion is a process in which a substance reacts chemically with oxygen and gets oxidised, with the release of energy in the form of heat and light. It is a fast process. During the process of burning, along with energy, carbon dioxide and water vapour are also produced.

4. Substances which are burnt to produce large amount of energy in the form of heat and light are known as fuels.



Ex - CNG, LPG, etc.

5. (a) Aquatic animals and plants ~~are~~ are able to survive in water because they take up the dissolved oxygen present in water.
- (b) This happens because the oxygen in the air trapped in the inverted glass is used up and the candle does not get any more oxygen for burning. ~~There~~ There is only nitrogen present which is a non-supporter of burning.
- (c) At higher altitudes, the air is less dense or thin and breathing becomes difficult. Similarly, air becomes less dense below the surface of the earth. That is why mountaineers and divers carry oxygen cylinders with them.
- (d) When water is heated, we see bubbles rising up because the bubbles ~~are~~ is the air present in water. Kinetic energy also increases on heating water.