Short Answer Questions

Q.1. Garima observed that when she left her tightly capped bottle full of water in the open sunlight, tiny bubbles were formed all around inside the bottle. Help Garima to know why it so happened? [NCERT Exemplar]

Ans. Air dissolved in water starts escaping in the form of tiny bubbles due to heat from the sun.

Q.2. Why does the transparent glass of windows, if not wiped off regularly, appears hazy?

Ans. Air contains dust and smoke along with the gases. These gets deposited on the glass windows and make them appear hazy.

Q.3. Why during an incident of fire, one is advised to wrap a woollen blanket over a burning object?

Ans. For combustion to take place, oxygen is required. When a woollen blanket is wrapped over a burning object, fire loses contact with oxygen and, therefore, stops burning after sometime.

Q.4. Why do you think, mountaineers carry oxygen cylinders with them, while climbing high mountains?

Ans. As we go higher on the mountains, the air becomes thinner. The amount of oxygen decreases and it becomes hard to breath. Therefore, mountaineers carry oxygen cylinders with them.

Q.5. How do the organisms living in soil get the air they need, for respiration?

Ans. The spaces between the soil particles are filled with air. This air is taken up by plants and animals for respiration.

Q.6. Why all the oxygen of atmosphere does not get used up though a large number of organisms are consuming it?

Ans. A large number of organisms take up oxygen for respiration and release carbon dioxide. Plants take up this carbon dioxide and release oxygen in the atmosphere. Therefore, this balance is maintained.

Q.7. Name the gas required (i) for breathing, (ii) for photosynthesis, (iii) to extinguish a fire, (iv) to make fertilisers, and (v) for burning.

Ans.

- i. Oxygen,
- ii. carbon dioxide,
- iii. carbon dioxide,
- iv. nitrogen, and
- v. oxygen.

Q.8. Two jars A and B are filled with two gases—nitrogen and oxygen. Both are colourless and odourless. How can you identify the jar that contains oxygen gas?

Ans. By bringing a burning matchstick near the mouth of both jars, presence of oxygen can be checked. The matchstick will extinguish near the jar containing nitrogen.

Q.9. Study the figures given below and answer the questions that follow.



Q. Why does air enter in (ii)?

Ans. When the glass is tilted, the air present in the glass is rapidly replaced with water.



Q. Why does the candle get extinguished when covered with a glass jar?

Ans. For burning, oxygen is required. When covered, the candle does not get access to oxygen, hence it extinguishes.



Q. When the candle gets extinguished, why does the level of water rise in the inverted jar (ii)?

Ans. When the candle extinguishes, the temperature inside the jar decreases and the temperature drops. To equalise the pressure, water enters into the jar.

Q.10. Why are factories fitted with tall chimneys?

Ans. Burning of fuel and materials produce smoke and other harmful gases which are released out of the factories by the chimneys.