Short Answer Questions

Q.1. Classify the following processes into physical or chemical changes:

a. **Beating of aluminium metal to make aluminium foil.**
b. **Digestion of food.**
c. **Cutting of a log of wood into pieces.**
d. **Burning of crackers.**

[NCERT Exemplar]

Ans. (a) and (c) are physical changes.

(b) and (d) are chemical changes.

Q.2. Explain the following:

[NCERT Exemplar]

Q. Lime water turns milky on passing carbon dioxide gas into it.

Ans. White coloured insoluble calcium carbonate is formed.

Q. Bubbles are produced when acetic acid is added to a solution of sodium hydrogencarbonate.

Ans. Carbon dioxide is evolved due to the chemical reaction between acetic acid and sodium hydrogencarbonate.

Q.3. How can iron articles be prevented from rusting?

Ans. Iron articles can be prevented from rusting by greasing, painting, galvanising electroplating, alloying, plastic coating or chromium plating.

Q.4. What is rust? How is it formed?

Ans. The reddish-brown covering of flaky substance on iron objects is called rust. When an iron object is left in moist air for a considerable time, rust is formed.

Q.5. Why does a magnesium ribbon burn with a dazzling white flame?

Ans. This is because magnesium reacts with oxygen in air to form white coloured magnesium oxide.

Q.6. Give example of two substances that can undergo physical and chemical changes, depending upon the conditions.

Ans. (i) On heating, wax melts (physical change) but on burning it forms carbon dioxide (chemical change).

(ii) On heating, water converts to water vapours (physical change) but on passing electricity through it, it splits into hydrogen and oxygen (chemical change).

Q.7. Why you are advised not to play with fireworks?

Ans. Explosion of firework is a chemical change and produces heat, light, sound and unpleasant gases that pollute the atmosphere, so it is advised not to play with fireworks.

Q.8. When chemical reaction takes place, what changes accompany the formation of new substances?

Ans. The following changes accompany the formation of new substances: change in state, colour, temperature, odour, sound may be produced or gas may evolve.