

4) a) ans) Freezing of water means liquids water converting into solid ice. Here only a change in physical state is seen and it is reversible and no new substance is formed hence it is physical change. Even evaporation of water is physical change as it involves change of state and it is reversible change.

b) ans) When some of the molten wax drops on the floor, it again solidifies which shows -

c) ans) When a candle is lighted, some of the solid wax first melts and turns into liquid then it burns to produce a flame. New substances CO_2 and water vapour are formed along with the evolution of light and heat energy. This formed shows a chemical change.

When some of the molten wax drops on the floor, it again solidifies which shows a physical change.

c) ans) When a piece of paper is burnt, a new substance ash is produced. Even when the burning is stopped, the ash cannot be changed back into paper. This shows that the formation of the ash from the paper is a permanent and irreversible change.

d) ans) Cutting of a cloth piece is a physical change because it does not change chemical composition of cloth and the change is only in the state, size, shape, colour, texture or the smell of some or all of the substances that undergo physical change.

Some changes where both Physical and chemical changes occur simultaneously.

Ex. Burning of candle \rightarrow Initially Melts (Phy.)
then burns (Chem.)

② Burning of copper wire (Chem)
Melting - Burning.

③ Heating Sodium Nitrate:

