PASSAGE-I : The process of sublimation is used to separate those solids from their mixture which directly pass to vapour state upon heating without passing through the liquid state and the vapours on cooling give back the solid again.

Solid $\stackrel{\text{heat}}{\longleftrightarrow}$ Vapours

The mixture is taken in a China dish and is covered by a glass funnel and heated to separate the sublimate.

- 1. Which of the following undergoes sublimation?
 - (a) Iodine (b) Chlorine
 - (c) Sulphur (d) Iron
- A mixture of salt and camphor is heated. The fumes which are evolved will be of
 - (a) salt (b) camphor
 - (c) salt and camphor
 - (d) no vapours are evolved.
- 3. What happens when a mixture containing a sublimate is heated?
 - (a) Sublimate is left in China dish.
 - (b) Non-sublimate is left in China dish.
 - (c) Sublimate is deposited on the outer end of funnel.
 - (d) Non-sublimate is deposited on the inner cold surface of the funnel.

PASSAGE-II : To separate the constituents of a mixture containing *A*, *B* and *C*, put the mixture on a wide dish. Move a magnet over the mixture, *A* will be separated. Transfer the remaining mixture into a China dish and subject it to sublimation. *B* will be separated on heating and *C* is left as residue, which is insoluble in water.

1. The component *A* in the mixture is

(a)	iron filings	(b)	sand
(c)	camphor	(d)	sugar.

- 2. The component *B* left as sublimate on the funnel is
 - (a) iron filings (b) camphor
 - (c) sand (d) sugar.
- The component C left as residue in the China dish is
 - (a) camphor (b) sugar
 - (c) iron filings (d) sand.

PASSAGE : Evaporation is a method used to isolate a soud substance (solute) dissolved in a solution. On heating a solution in an open and broad container the solvent evaporates leaving behind the solute. This method is also used in obtaining salt from sea water.

- The rate of evaporation of a liquid increases with
 - (a) increase in temperature
 - (b) decrease in temperature
 - (c) keeping the liquid in dark
 - (d) pouring the liquid on a filter paper.
- 2. For obtaining salt from sea water,
 - (a) water is heated in big containers
 - (b) water is boiled in boilers
 - (c) collected water is evaporated in shallow pits.
 - (d) water is evaporated in beakers.
- 3. Which of the following components is converted into vapours on heating?
 - (a) Non-volatile component
 - (b) Volatile component
 - (c) Both volatile and non-volatile components
 - (d) Only water can be converted to vapour
- 4. Evaporation takes place at
 - (a) boiling point of solution
 - (b) all temperatures
 - (c) freezing point of a solution
 - (d) 100°C only.

PASSAGE : After preparing tea, we need to remove the tea leaves. This is done by the help of a strainer. To remove any insoluble component from a mixture of insoluble solids and a liquid, a filter can be used. Depending upon the size of the solid to be removed, the size of the pores of the filter can be selected. Various substances like filter paper, sand, cotton, charcoal, thin cloth etc., can be used as filters.

- *Paneer* or cottage cheese is separated from liquid by using
 - (a) a muslin cloth (b) charcoal
 - (c) alum (d) sieve.
- 2. Which of the following cannot be separated by filtration?
 - (a) Sand and water (b) Mud and water
 - (c) Salt and water (d) Sawdust and water
- 3. Filtration using a filter paper can be used to separate
 - (a) water from milk
 - (b) water from kerosene oil
 - (c) water from sugar solution
 - (d) water from muddy water.