

# BRAIN INTERNATIONAL SCHOOL

Chemistry Assignment

Class: IX

April/May'21

## Chapter :1-Matter in our Surroundings

### 1. MULTIPLE CHOICE QUESTIONS:

- (i). When a gas jar full of air is placed upside down on a gas jar full of bromine vapours, the red-brown vapours of bromine from the lower jar go upward into the jar containing air. In this experiment:
- (a) Air is heavier than bromine
  - (b) Both air and bromine have the same density
  - (c) Bromine is heavier than air
  - (d) Bromine cannot be heavier than air because it is going upwards against gravity
- (ii) The property of flow is unique to fluids. Which one of the following statements is correct?
- (a) Only gases behave like fluids
  - (b) Gases and solids behave like fluids
  - (c) Gases and liquids behave like fluids
  - (d) Only liquids are fluids
- (iii) During summer, water kept in an earthen pot becomes cool because of the phenomenon Of :
- (a) diffusion            (b) transpiration            (c) osmosis            (d) evaporation
- (iii) Which of the following phenomena would increase on raising the temperature?
- (a) Diffusion, evaporation, compression of gases
  - (b) Evaporation, compression of gases, solubility
  - (c) Evaporation, diffusion, expansion of gases
  - (d) Evaporation, solubility, diffusion, compression of gases

### 2. ASSERTION-REASON QUESTIONS:

Select the correct answer to these questions from the codes (i), (ii), (iii) and (iv) as given below

- (i) Both A and R are true and R is correct explanation of the assertion.
- (ii) Both A and R are true but R is not the correct explanation of the assertion.
- (iii) A is true but R is false.
- (iv) A is false but R is true.

**Assertion (A):** Boiling is a bulk phenomena.

**Reason (R):** It takes place at room temperature.

**Assertion (A):** In gaseous state particles move randomly in high speed.

**Reason (R):** The particles of gases have least forces of attraction.

3. Read the given passage and answer the questions that follows based on the passage and related studied concepts.

Matter is anything that occupies space and has mass. Matter is classified into solid, liquid and gas. In solid state particles are closely packed and have very strong force of attraction, particles can only vibrate and rotate around fixed positions. In liquid state, particles are less closely packed and have strong force of attraction but less than solids, particles can move throughout the liquid. In Gaseous state, particles are far apart with weak force of attraction and are in state of constant random motion. Gases can be easily compressed where as solids and liquids are incompressible.

1. An inflated balloon is placed in refrigerator, what will happen?
  - (a) Balloon will shrink and particles will move faster and become closer.
  - (b) Balloon will expand and particles will move faster and become far apart.
  - (c) Balloon will shrink, particles will move slower and become close together.
  - (d) Balloon will expand, particles will move slower and come closer therefore, volume of balloon will decrease.
2. When solid changes into vapours, the process is called ?
  - (a) Evaporation (b) Boiling (c) Sublimation (d) Vaporisation
3. A substance melts at  $5^{\circ}\text{C}$  and boils at  $150^{\circ}\text{C}$ . What will be its physical state at room temperature?
4. Why do we feel more cold after taking bath with hot water?

**Answer the following questions :**

1. Boiling point of alcohol is  $78^{\circ}\text{C}$ . Change it into Kelvin.
2. Give reasons for the following:
  - (a) Why does ice float on water?
  - (b) Why does a gas fill completely in the vessel in which it is kept ?
  - (c) Latent heat of vapourisation of two liquids 'A' and 'B' is 100 and 150J/Kg. Which one will produce more cooling effect and why ?
3. Name the phenomenon which occurs in these following processes:
  - (a) Formation of clouds (b) Drying of wet clothes (c) Wax melting in sun.
4. What is meant by plasma? Explain.
5. Define the following : (a) Boiling point (b) Melting point (c) Evaporation

