EXERCISE- 1

A. Very Short Answer Type Questions

Q.1 Name the three states of water.

Q.2 Which state of matter has neither definite shape nor volume?

Q.3 Name the physical state of matter

(A) Which can be easily compressed

(B) Which is most rigid

(C) Which can flow but cannot fill the vessel completely.

Q.4 Name two substance which can sublime?

Q.5 Convert the following temperature to Celsius scale:

(1) 323 K (2) 600 K

Q.6 Two liquids A and B have boiling points 350 k and 375 k respectively. Which of the two has greater intermolecular forces of attraction.

Q.7 Name the process for the following changes**:**

(1) Liquid $\longrightarrow$ Solid

(2) Solid $\longrightarrow$ Gas

(3) Gas $\longrightarrow$ Liquid

Q.8 Which will have more density **:** ice or steam?

Q.9 In which physical state water exists at

(1) 100ºC (2) 0ºC

Q.10 Will increase of surface area increase or decrease rate of evaporation?

Q.11 What is the general name of fluid forms of matter?

Q.12 Give two reasons for saying that wood is a solid.

Q.13 Which diffuses faster **:** a liquid or a gas?

Q.14 If the fish is being fried in a neighbouring home, we can smell it sitting in our own home. Name the process which brings this smell to us

Q.15 The boiling point of water is 100ºC. Express this in SI units (Kelvin scale).

Q.16 The kelvin temperature is 270 K. What is the corresponding Celsius scale temperature?

Q.17 What is the common name of solid carbon dioxide?

Q.18 What is the chemical name of dry ice?

B. Short Answer Type Questions

(About 30–40 words)

Q.19 How does perspiration or sweating help keep our body cool on a hot day?

Q.20 If the back of your hand is moistened with alcohol, you will find that it rapidly becomes dry. Why is it that while it is drying, your hand feels cool?

Q.21 How does the water kept in an earthen pot (matka) become cold during summer?

Q.22 What type of clothes should we wear in summer? Why?

Q.23 What do you understand by the term 'latent heat'? What are the two types of latent heat?

Q.24 What is meant by saying that the latent heat of vaporisation of water is 22.5×10^5 J/kg?

Q.25 Define 'melting point' of a substance? What is the melting point of ice?

Q.26 Define 'boiling point' of a substance? What is the boiling point of water?

Q.27 What is sublimation? Name two substances which undergo sublimation

Q.28 Compare the three states of matter in terms of

(1) Compressibility

(2) Density

(4) Energy of molecules.

Q.29 How do solids, liquids and gases differ in shape and volume?

EXERCISE- 2

A. Long Answer Type Questions

(More than 60–70 words)

Q.1 Explain the following **:**

(1) Gases exert pressure

(2) Evaporation causes cooling

(3) Solids can be converted to liquids

(4) Gases diffuse rapidly

Q.2 When a crystal of potassium permanganate is placed in a beaker, its purple colour spreads throughout of water. What does this observation tell us about the nature of potassium permanganate and water?

Q.3 When a gas jar containing air is inverted over a gas jar containing bromine vapour, the red brown bromine vapour diffuse into air. Explain how bromine vapour diffuse into air.

Q.4 When sugar is dissolved in water, there is no increase in the volume. Which characteristic of matter is illustrated by this observation?

Q.5 A piece of chalk can be broken into small particles by hammering but a piece of iron cannot be broken into small particles by hammering. Which characteristic of the particles of matter is illustrated by these observations?

Q.6 Why does a gas fill a vessel completely?

Q.7 Why do gases have neither a fixed shape nor a fixed volume?

B. Fill in the Blanks

Q.8 Solid, liquid and gas are called the three.....of matter.

Q.9 The smell of perfume gradually spreads across a room due to.....**.**

Q.10 Liquid and.....states are known as fluid states.

Q.11 The temperature 273ºC on kelvin scale is equal to.....**.**

Q.12 The boiling point of water on kelvin scale is.....**.**

Q.13 The amount of heat required to convert 1 kg of solid into liquid at its melting point is called.....**.**

Q.14 Liquid water at 100ºC has.....energy than steam at 100ºC.

Q.15 The temperature at which a liquid changes into gas/vapour is called.....**.**

Q.16 Change of state direct from solid to gas without changing in liquid state is called.....**.**

Q.17 Intermolecular space in solids is.....than that in liquids.

Q.18 Boiling point of water is .....K and melting point of ice is.....K.

Q.19 Change of liquid state to solid state is called.....**.**

Q.20 .....have definite volume but not definite shape.

Q.21 Among solid, liquid and gaseous states,.....state is most rigid.

Q.22 Change of vapour state to liquid state is called.....**.**

Q.23 Solids are.....**.**

Q.24 Gases have.....rate of diffusion than solids.

ANSWER KEY

EXERCISE-1

Very Short Type Answer

1. Ice (solid), water (liquid), steam (gas)
2. gaseous state
3. (A) gas (B) solid (C) liquid
4. Camphor, ammonium chloride
5. 50ºC, 327ºC
6. B
7. (1) solidification (2) Sublimation (3) Condensation
8. Ice
9. (1) Vapour (2) Ice
10. Increase
11. Liquid
12. Wood has fixed shape and fixed volume
13. Gas
14. Diffusion
15. 373 K
16. – 3ºC
17. Dry ice
18. Solid carbondioxide

EXERCISE-2

Fill in the blanks

8. States
9. Diffusion
10. Gaseous
11. 546 K
12. 373 K
13. Latent heat of fusion
14. Less
15. Boiling point
16. Sublimation
17. Less
18. 373 K,273 K
19. Solidification
20. Liquids
21. Solid
22. Condensation
23. Rigid
24. Larger