**ASSIGNMENT QUESTIONS**

**CHAPTER – 1**

**MATTER IN OUR SURROUNDINGS**

1. Fill in the blanks

a. The process of \_\_\_\_\_\_\_\_ causes cooling.

b. The process of cooling glass is known as \_\_\_\_.

c. Liquids have no fixed \_\_\_\_\_\_ but have fixed \_\_\_\_\_.

d. \_\_\_\_ exists in all three states of matter.

e. Carbon dioxide is a white solid called \_\_\_\_\_ at temperature below \_\_\_\_\_\_.

2. State True or False

a. Evaporation of water is a bulk phenomenon.

b. Diffusion takes place in haphazard and random way.

c. SI unit of pressure is Pascal.

d. A gas is highly incompressible fluid.

e. Solids and liquids can be identified from their characteristic melting and boiling points.

3. Zig-zag movement of the solute particle in a solution is known as

(a) Linear motion

(b) Circular motion

(c) Brownian motion

(d) Curved motion.

4. Gases can be liquified by

(a) increasing pressure

(b) decreasing temperature

(c) both (a) and (b)

(d) decreasing pressure

5. Density of a substance is defined as

(a) ratio of mass and volume

(b) product of mass and volume

(c) ratio of mass and temperature

(d) product of mass and temperature

6. Which of the following is not matter

(a) Blood

(b) Humidity

(c) Electron

(d) Moon rock

7. Which is more effective in cooling?

(a) Ice at 0° C

(b) Water at 0° C

(c) Water at 100° C

(d) Ice at 100° C

8. 0° C temperature is equal to

(a) 0 K

(b) 273 K

(c) -273 K

(d) 300 K

9. The process involving the change of state from solid to gas is called

(a) melting

(b) boiling

(c) sublimation

(c) fusion

10. A solid has

(a) definite volume and no definite shape

(b) no definite volume no definite shape

(c) definite shape and volume

(d) definite shape but no definite volume

11. A liquid has

(a) definite volume and no definite shape

(b) no definite volume no definite shape

(c) definite shape and volume

(d) definite shape but no definite volume

12. A gas has

(a) definite volume and no definite shape

(b) no definite volume no definite shape

(c) definite shape and volume

(d) definite shape but no definite volume

13. Which of the following is NOT a property of particles of a matter?

(a) The particles of matter are extremely small

(b) The particles of matter have spaces between them.

(c) The particles of matter are in stationery state.

(d) The particles of matter attract each other.

14. Which of the following has minimum spaces among the particles?

(a) Solids

(b) Liquids

(c) Gases

(d) None of these

15. During summer, water kept in an earthen pot becomes cool because of the phenomenon of

(a) diffusion

(b) transpiration

(c) osmosis

(d) evaporation

16. Rate of diffusion is the fastest in

(a) Solids

(b) Liquids

(c) Gases

(d) None of these

17. Thermal conduction takes places in

(a) solids only

(b) liquids only

(c) gases only

(d) solids, liquids and gases.

18. Evaporation always causes

(a) thermal expansion

(b) Liquification

(c) Cooling down

(d) all of these

19. A change of state directly from solid to gas without changing into liquid state (or vice versa) is called

(a) Evaporation

(b) Sublimation

(c) Diffusion

(d) Condensation

20. The rate of evaporation decreases with

(a) increase in humidity

(b) increase of temperature

(c) increase in wind speed

(d) increase of surface area

21. Expand CNG and LPG.

22. Arrange the following substances in increasing order of force of attraction between the particles. (i) milk (ii) salt (iii) oxygen

23. Why is sponge a solid though compressible?

24. Write one important characteristic of matter.

25. Why does a desert cooler cool better in a hot dry day?

26. Convert: (a) 25°C into kelvin scale (b) 500 K into celsius scale

27. Why does the smell of hot sizzling food reach you several metres away but to get the smell from cold food you have to go close?

28. What is the term used for change of solid state to liquid state?

29. Name the temperature at which solid and liquid states of matter can coexist.

30. Define evaporation.

31. "The wool being knitted into a sweater is a physical change." Justify the statement.

32. Mention two ways to liquefy atmospheric gases.

33. What is the value of boiling point of water on Kelvin Scale of temperature?

34. What is dry ice?

35. (a) Dry ice is compressed at high pressure. What happens when pressure is released? (b) Suggest a method to liquefy atmospheric gases

36. (a) The melting points of 2 substances A & B are 280 K and 320 K respectively. Are these substances liquid at room temperature? Justify your answer.

(b) Give an example that shows the state of matter can be changed into another state by changing the temperature.

37. How will you show that matter is composed of tiny particles?

38. Define (i) Latent heat of fusion and (ii) latent heat of vapourisation.

39. Explain how the following factors affect the rate of evaporation of a liquid: (i) temperature of the liquid. (ii) area of the exposed surface. (iii) moisture in the surrounding air. (iv) increase in wind speed.

40. When a bottle of scent is opened in one corner of a room, it immediately spreads throughout the room. What property of matter is responsible for this observation? Explain.

41. (a) Conversion of solid to vapour is called sublimation. Name the term used to denote the conversion of vapour to solid.

(b) Conversion of solid state to liquid state is called fusion; what is meant by latent heat of fusion?

42. Both boiling and evaporation convert a liquid into vapours. What is the difference between the two processes?

43. A sample of water under study was found to boil at 102Â°C at normal pressure. Is the water pure? Will this water freeze at 0Â°C? Comment.

44. Why does the temperature of a substance remain constant during its [m.pt](http://m.pt/). or boiling point?

45. Answer the following questions:

(i) Arrange the following substances in increasing order of force of attraction between the particles.(a) water (b) hydrogen (c) sand

(ii) Why does the temperature remain constant at the melting point?

(iii) Which property of gases makes it possible to fill large volume of gases in small cylinders?

46. Answer the following questions:

(a) Why is ice at 273 K more effective in cooling than water at the same temperature?

(b) Name the two gases which are supplied in compressed form in homes and hospitals.

47. You want to wear your favourite shirt to a party but the problem is that it is still wet after a wash. What steps would you take to dry it fast?

48. Give reasons:

(a) Steam produces more severe burns than boiling water.

(b) We are able to sip hot tea faster from a saucer rather than from a cup. (c) Water kept in an earthen pot becomes cool during summer.

49. Why do cotton clothes suit best in summer?

50. Classify the following into osmosis and diffusion:

(a) Swelling up of a resin on keeping in water.

(b) Spreading of virus on sneezing.

(c) Earthworm dying on coming in contact with common salt. (d) Shrinking of grapes kept in thick sugar syrup.

(e) Preserving pickles in salt.

(f) Aquatic animals using oxygen dissolved in water during respiration.