



**Note:** (1) Think and Answer (2) Attend all objective questions on the test paper

(3) Parents' signature must post-test (4) Doubts-related test paper is entertained except for hint.

**Name:**

**Date:**

<b>Areas of improvement:</b>

<b>Maximum Marks (objective)</b>	
<b>Marks Obtained</b>	
<b>%</b>	
<b>Maximum Marks (Subjective)</b>	
<b>Marks Obtained</b>	
<b>%</b>	
<b>Maximum Marks</b>	
<b>Marks Obtained</b>	
<b>%</b>	

<b>Parent's Signature</b>	<b>Parent's Signature</b>



## I. Objective Questions:

### A. Multiple Choice Questions:

[ 0.5 x 30 = 15 ]

1. 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

2. A few substances are arranged in the increasing order of 'forces of attraction' between their particles. Which one of the following represents a correct arrangement?

- (a) Water, air, wind                      (b) Air, sugar, oil  
(c) Oxygen, water, sugar              (d) Salt, juice, air

3. Choose the correct statement of the following

- (a) Conversion of solid into vapours without passing through the liquid state is called sublimation.  
(b) Conversion of vapours into solid without passing through the liquid state is called vaporisation.  
(c) Conversion of vapours into solid without passing through the liquid state is called freezing.  
(d) The conversion of solid into liquid is called sublimation.

4. In which of the following conditions, the distance between the molecules of hydrogen gas would increase?

- (i) Increasing pressure on hydrogen contained in a closed container  
(ii) Some hydrogen gas leaking out of the container  
(iii) Increasing the volume of the container of hydrogen gas  
(iv) Adding more hydrogen gas to the container without increasing the volume of the container
- (a) (i) and (iii)  
(b) (i) and (iv)  
(c) (ii) and (iii)  
(d) (ii) and (iv)



5. Intermixing of particles of two different types of matter on their own is called –

- (a) diffusion                      (b) sublimation                      (c) evaporation                      (d) humidity

6. If the surface area is increased, then the rate of evaporation is –

- (a) decreased   (b) remain the same  
(c) increased   (d) evaporation does not depend on the surface area.

7. The forces of attraction between particles are maximum in

- (a) water                      (b) ice  
(c) water vapour                      (d) neither maximum nor minimum but equal

8. The forces of attraction between particles are minimal in –

- (a) sugar                      (b) salt (c) water                      (d) oxygen

9. Some water vapour changes into liquid state, then its particles

- (a) gains energy                      (b) loses energy (c) neither loses energy nor gains energy  
(d) It depends on the atmosphere

10. Gases can be liquefied by

- (a) increasing pressure                      (b) decreasing temperature  
(c) both (a) and (b)                      (d) decreasing pressure

11. Which of the following is a characteristic property of a substance?

- a) Color                      b) Mass                      c) Volume                      d) Temperature

12. Which state of matter has the highest kinetic energy?

- a) Solid                      b) Liquid                      c) Gas                      d) Plasma

13. The state of matter with the least kinetic energy is:

- a) Solid                      b) Liquid                      c) Gas                      d) Plasma



**14.** Which of the following is the smallest unit of matter?

- a) Atom      b) Molecule      c) Particle      d) Element

**15.** In which of the following conditions, the distance between the molecules of hydrogen gas would increase?

(i) Increasing pressure on hydrogen contained in a closed container

(ii) Some hydrogen gas leaking out of the container

(iii) Increasing the volume of the container of hydrogen gas

(iv) Adding more hydrogen gas to the container without increasing the volume of the container

(a) (i) and (iii)

(b) (i) and (iv)

(c) (ii) and (iii)

(d) (ii) and (iv)

**16.** A form of matter has no fixed shape but it has a fixed volume. An example of this form of matter is

- (a) Krypton      (b) Kerosene      (c) Carbon steel      (d) Carbon dioxide

**17.** When heat is constantly supplied by a burner to boiling water, then the temperature of water during vaporisation :

(a) Rises very slowly      (b) Rises rapidly until steam is produced

(c) First rises and then becomes constant      (d) Does not rise at all

**18.** Which one of the following set of 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

**19.** Which of the following is the smallest unit of matter?

- a) Atom      b) Molecule      c) Particle      d) Element

**19.** In which of the following conditions, the distance between the molecules of hydrogen gas would increase?

(i) Increasing pressure on hydrogen contained in a closed container

(ii) Some hydrogen gas leaking out of the container



(iii) Increasing the volume of the container of hydrogen gas

(iv) Adding more hydrogen gas to the container without increasing the volume of the container

(a) (i) and (iii)

(b) (i) and (iv)

(c) (ii) and (iii)

(d) (ii) and (iv)

**20.** A form of matter has no fixed shape but it has a fixed volume. An example of this form of matter is

(a) Krypton

(b) Kerosene

(c) Carbon steel

(d) Carbon dioxide

**21.** Which one of the following set of 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

**22.** Which of the following cannot be considered a form of matter?

(a) Atom

(b) Water

(c) Humidity

(d) Electron

**23.** Which of the following causes the temperature of a substance to remain constant while it is undergoing a change in its state?

(a) Latent heat

(b) Lattice energy

(c) Loss of heat

(d) None of these

**24.** Which of the following statements is correct?

(a) Materials existing as liquids at room temperature have their melting and boiling points lower than that of room temperature.

(b) The phenomenon involving the transition of a substance from solid to liquid state is called sublimation.

(c) To convert a temperature on the Celsius scale to Kelvin scale, subtract 273 from the given temperature

(d) The density of ice is less than that of water.



**25.** Which of the following statements is not true regarding the characteristics of matter?

- (a) Particles of a matter are randomly moving in all directions.
- (b) Kinetic energy of the particles increases with a rise in temperature
- (c) Kinetic energy of the particles of all matters remains the same at a particular temperature.
- (d) Particles of matter diffuse into each other on their own.

**26.** What effect does a change in temperature have on matter?

- a) It changes the state of matter      b) It changes the color of matter
- c) It changes the mass of matter      d) It changes the chemical composition of matter

**28.** How does evaporation cause cooling?

- a) By releasing heat    b) By absorbing heat
- c) By releasing energy d) By absorbing energy

**29.** Which of the following statements is correct?

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- (b) The phenomenon involving the transition of a substance from solid to liquid state is called sublimation.
- (c) To convert a temperature on the Celsius scale to Kelvin scale, subtract 273 from the given temperature
- (d) The density of ice is less than that of water.

**30.** Which of the following statements is not true regarding the characteristics of matter?

- (a) Particles of a matter are randomly moving in all directions.
- (b) Kinetic energy of the particles increases with a rise in temperature
- (c) Kinetic energy of the particles of all matters remains the same at a particular temperature.
- (d) Particles of matter diffuse into each other on their own.

**B.Fill in the blanks:**

- (a) Evaporation of a liquid at room temperature leads to a \_\_\_\_\_ effect.
- (b) At room temperature the forces of attraction between the particles of solid substances are \_\_\_\_\_ than those which exist in the gaseous state.



(c) The arrangement of particles is less ordered in the \_\_\_\_\_ state. However, there is no order in the \_\_\_\_\_ state.

(d) \_\_\_\_\_ is the change of solid state directly to vapour state without going through the \_\_\_\_\_ state.

(e) The phenomenon of change of a liquid into the gaseous state at any temperature below its boiling point is called \_\_\_\_\_.

C. Match the physical quantities given in column A to their S I units given in column B:

(A)	(B)
(a) Pressure	(i) cubic metre
(b) Temperature	(ii) kilogram
(c) Density	(iii) pascal
(d) Mass	(iv) kelvin
(e) Volume	(v) kilogram per cubic metre

## Short Answer Questions:

Q1. Why is ice at 273K more effective in cooling than water at the same temperature?

Q2. Write the factors behind the rate of evaporation.

Q3. What do you mean by fusion?

Q4. Arrange the following substances increasing, order of forces of attraction between the particles water, ice, water vapour.

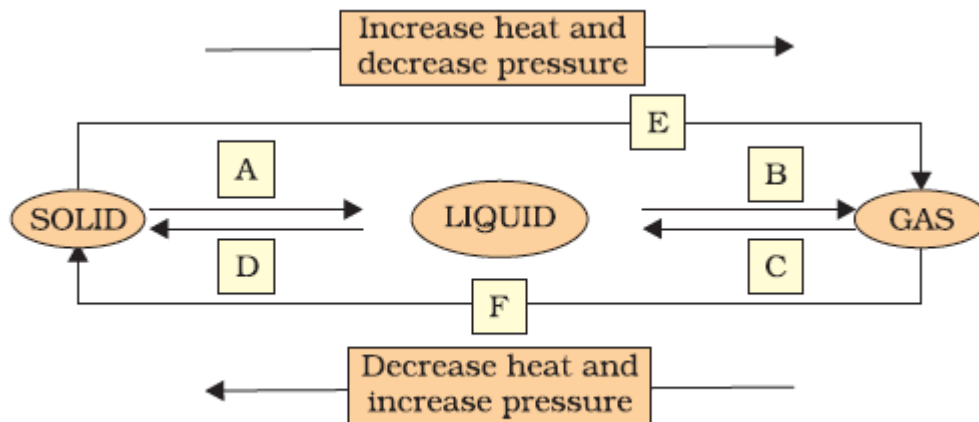
Q5. Why does our palm feel cold when we put on some acetone or petrol, or perfume on it?

Q6. Why is ice at 273K more effective in cooling than water at the same temperature?



### III. Long Answer Questions:

Q7. Name A, B, C, D, E, and F in the following diagram showing a change in its state.



Q8. What are the characteristics of the particles of matter?