Core Natural Science

B.EL.Ed First Year

MCQ'S ON STATES OF MATTER

Question 1.

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

Answer

Answer: (c) Evaporation, diffusion, expansion of gases

Question 2.

Seema visited a Natural Gas Compressing unit and found that the gas can be liquefied under specific conditions of temperature and pressure. While sharing her experience with friends she got confused. Help her to identify the correct set of conditions.

(a) Low temperature, low pressure

(b) High temperature, low pressure

(c) Low temperature, high pressure

(d) High temperature, high pressure

Answer

Answer: (c) Low temperature, high pressure

Question 3.

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

Answer

Answer: (c) Gases and liquids behave like fluids

Question 4.

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

(a) diffusion

(b) transpiration

(c) osmosis

(d) evaporation

Answer

Answer: (d) evaporation

Question 5.

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

Answer

Answer: (c) Oxygen, water, sugar

Question 6.

On converting 25°C, 38°C and 66°C to Kelvin scale, the correct sequence of temperature will be

(a) 298 K, 311 K and 339 K

(b) 298 K, 300 K and 338 K

(c) 273 K, 278 K and 543 K

(d) 298 K, 310 K and 338 K

Answer

Answer: (a) 298 K, 311 K and 339 K

Question 7.

Choose the correct statement from the following:

(a) Conversion of solid into vapour without passing through the liquid state is called vapourisation.

(b) Conversion of vapour into solid without passing through the liquid state is called sublimation.

(c) Conversion of vapour into solid without passing through the liquid state is called freezing.

(d) Conversion of solid into liquid is called sublimation.

Answer

Answer: (b) Conversion of vapour into solid without passing through the liquid state is called sublimation.

Question 8.

The boiling points of diethyl ether, acetone and n-butyl alcohol are 35°C, 56°C and 118°C respectively. Which one of the following correctly represents their boiling points in Kelvin scale?

(a) 306 K, 329 K and 391 K

(b) 308 K, 329 K and 392 K

(c) 308 K, 329 K and 391 K

(d) 329 K, 392 K and 308 K

Answer

Answer: (c) 308 K, 329 K and 391 K

Question 9.

Which condition out of the following will increase the evaporation of water?

(a) Increase in temperature of water

(b) Decrease in temperature of water

(c) Less exposed surface area of water

(d) Adding common salt to water

Answer

Answer: (a) Increase in temperature of water

Question 10.

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)

Answer

Answer: (c) (ii) and (iii)

Question 11.

The boiling point of water at sea level is

(a) 0°C

(b) 273 K

(c) 373 K

(d) 273°C

Answer

Answer: (c) 373 K

Question 12.

Which of the following has the strongest interparticle forces at room temperature?

(a) Oxygen

(b) Water

(c) Bromine

(d) Iron

Answer

Answer: (d) Iron

Question 13.

Which of the following conditions is most favourable for converting a gas into a liquid?

(a) High pressure, low temperature

(b) Low pressure, low temperature

(c) Low pressure, high temperature

(d) High pressure, high temperature

Answer

Answer: (a) High pressure, low temperature

Question 14.

Dry ice is

(a) water in solid state

(b) water in gaseous state

(c) CO_2 in liquid state

(d) CO_2 in solid state

Answer

Answer: (d) CO_2 in solid state

Fill in the blanks:

1. Evaporation of a liquid at room temperature leads to a …….. effect.

Answer

Answer: cooling

2. At room temperature the forces of attraction between the particles of solid substances are …….. than those which exist in the gaseous state.

Answer

Answer: stronger

3. The arrangement of particles is less ordered in the ……. state. However, there is no order in the …….. state.

Answer

Answer: liquid, gaseous

4. …… is the change of gaseous state directly to solid state without going through the ……. state.

Answer

Answer: Sublimation, liquid

5. The phenomenon of change of a liquid into the gaseous state at any temperature below its boiling point is called ……

Answer

Answer: evaporation