

**Sample Paper – 2014**  
**Class – IX**  
**Subject – Science (Chemistry)**  
LESSON NO. 1 MATTER IN OUR SURROUNDING  
EXTRA QUESTION

**...QUESTIONS AND ANSWERS...**

Q 1 : List two ways to liquefy gases. – **1 mark.**

ANS:

Q 2 : Give reasons for the following. – **3 marks.**

A] Water droplets appear on the outer surface of the tumbler containing ice cold water.

ANS:

B] People preferred to wear cotton clothes in summer.

ANS:

C] On a hot sunny day people sprinkle water on the roof or the open ground.

ANS:

Q 3 : What is evaporation? List the factors that affect the rate of evaporation and explain their effect on it.– **5 marks.**

ANS:

Q 4 : Write the name of any two substance that sublime . – **1 mark.**

ANS:

Q 5 : Carbon dioxide is a gas. Write any two properties to justify it. – **2 marks.**

ANS:

Q 6 : How can we liquefy the gas? Solid carbon dioxide is known as dry ice. Why? – **3 marks.**

ANS: Carbon dioxide has either fixed volume or fixed shape. It exerts pressure due to collision of the molecules happen. Carbon dioxide can be liquefy by reducing temperature or by increasing pressure .Solid carbon dioxide gets connected directly into gaseous state without coming into liquid state.

Q 7 :Define the following properties of matter.

A] [1–] Rigidity [2 –] Diffusion [3 –]

Compressibility – **3 marks.**

ANS :

B] Arrange solid liquid and gaseous in the ascending order as regards the extent to which each of the above properties is executive them . – **1 mark.**

ANS:

C] Write any one example from your daily life experience which is based on diffusion of gases. – **1 mark.**

ANS:

Q 8 :Define the following : - - **6 marks.**

A] - [1] Rigidity, [2]Fluidity,[3]Density .

ANS]

B] – For any substance , why does the temperature remains constant during the change of state.

ANS]

C] – What types of clothes should we wear in summer?

ANS]

D] – why is the rate of diffusion of gases is faster in gaseous?

ANS]

Q 9] – Express the following in Kelvin Scale. – **2 marks.**

1] – 25 Degree Celsius , 2] – 373 degree Celsius

ANS]

Q 10] – We can easily move our hands in air. But not through any solid materials. Justify the statement giving any three possible reasons. – **2 marks .**

ANS]

Q 11] – [A] Differentiate between three states of matter on the basis of the following properties :- - **3 marks.**

I] Intermolecular forces.

II]Arrangement of molecules.

B] Liquid generally have low density but you must have observed that ice floats on water.

ANS:

Q 12] [A] – Explain giving one example of each factors , how rate of evaporation of water depends on each of them. – **2.5 marks.**

B] – Explain which one will cause more severe burns: boiling water at 100 degree Celsius or steam. – **2.5 marks.**

ANS:

Q 13] Does a evaporation cause a physical change or a chemical change . – **1 mark.**

ANS:

Q 14] Define the following terms: - **3 marks.**

A] Latent heat of fusion.

B] Melting point.

C] Fusion

ANS:

Q 15] [A]Define matter. Name the state of matter in which the forces between the constituent particles are: - **2 marks.**

1] Strongest.

2] weakest.

[B] Give reason for the following – **3 marks.**

[1] A liquid generally flows easily.

[2] Ice at 0 degree Celsius appears colder to the mouth than water at 0 degree Celsius. Why?

[3] Doctor advice to put strips of wet clothes on the forehead a person having high temperature.

ANS:

Q 16] List any two properties of particles of matter. – **2 marks.**

ANS:

Q 17] Give reason for the following – **3 marks.**

A] Why does ice floats on water.

B] Why does the gas feels completely in vessels in which it is kept.

C] Latent heat of evaporation of two liquids A and B 100 joules/kg .150 Joules/Kg respectively.

Which one can produce more cooling effect and why?

ANS:

Q 18] State all the factors that affect the rate of evaporation of water .Discuss how each one of these factors affect the rate of evaporation. – **5 marks.**

ANS:

Q 19] With the help of the diagram describe an activity to show that the state of water can be changed from solid to liquid and then to its gaseous state . Explain the term latent heat of evaporation and latent heat of vaporization. How will you change water from its gaseous state to liquid state suggest a simple activity. – **5 marks.**

ANS:

Q 20] Why does the level of water not changed when common salt is dissolved in water? – **1 mark.**

ANS:

Q 21] [A] What is matter? – **1 mark.**

[B] “The rate of diffusion in liquid is higher than that of solids”. Why? – 1 mark.

[C] Write two properties of gases and two properties of solids. - 2 marks.

[D] Write the full form of : - - **1 mark.**

I – LPG.

II – CNG.

ANS:

Q 22] Define boiling point of liquid. At What temperature in Kelvin scale does water boil. – **5 marks.**

ANS:

Q 23] Explain what will happen when we supply heat energy to water till it changes its state. What is this heat energy

called? – **2 marks**

ANS:

Q 24] The melting point of three solids X , Y and Z are

**298 Degree Kelvin , 314 Degree Kelvin , 398 degree Kelvin.**

Arrange these in increasing order of their interparticle force of attraction. – **3 marks.**

ANS:

Q 25] Suggest an activity to show that the rate of diffusion of liquids decreases with increase in density of liquids . – **3 marks.**

ANS:

Q 26] Name A , B , C , D , E , and F in the following diagram [page no. 12 of Science Textbook] Showing change in its state. - **2 marks.**

ANS:

Q 27] Distinguish in tabular form between Solid , Liquid , and Gaseous under the following characteristics :- **5 marks .**

1. Intermolecular attraction.
2. Density.
3. Fluidity.
4. Diffusion.
5. Kinetic energy of particles at a given temperature.

ANS:

	<u>Solid</u>	<u>Liquid</u>	<u>Gaseous</u>
<b>Intermolecular Attraction</b> →	Very strong	Very strong	Weak
<b>Density</b> →	Highest	Lower than solids	Low density
<b>Fluidity</b> →	Doesn't possess [not fluids]	Possess [liquids]	Possess [Fluids]
<b>Diffusion</b> →	Low	Faster than solids	Very rapid
<b>Kinetic energy Of particles</b> →	Least energy	Higher than solids	Maximum

Q 28] What is evaporation? In the following examples state which factors is responsible for the change in rate of evaporation and how. – **5 marks**

1. Clothes dry faster on windy day.
2. Wet clothes dry faster by spreading them.
3. Clothes dry faster in sun than in days.
4. Clothes take longer time to dry on rainy days.

ANS: Evaporation: The phenomenon of changing of liquid into vapours at any temperature below its boiling point is called evaporation. Factors that are responsible for the change in rate of evaporation are:

1. Wind speed increase , evaporation rate increases.
2. Surface area increases , rate of reaction increases.
3. Temperature increases , rate of evaporation increases.
4. Humidity increases , rate of reaction decreases.

Q 29] In which types of clothes would be you more comfortable in summer. – **1 mark.**

ANS:

Q 30] [A] Define boiling point . – **1 mark.**

[B] Express boiling point of water in Celsius as well as Kelvin scale. – **1 mark.**

[C] A diver can be able to cut through water in a swimming pool . Which property of matter does the observation show. – **2 marks.**

ANS:

Q 31][A] What is matter? Write two properties of solid and liquids. – **2 marks**

[B] Rakesh took two beakers A and B containing hot water and cold water respectively. In each beaker he drops a crystal of Copper Sulphate. He kept the beaker undisturbed . After sometime what did he observed why? – **2 marks.**

ANS:

Q 32] Define melting point of solid. At what temperature in the Kelvin scale does ice melts ? In the experiment to determine the melting point of ice , why does the temperature not rise even though heat is continuously supplied . What is this heat energy called? - **5 marks**

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