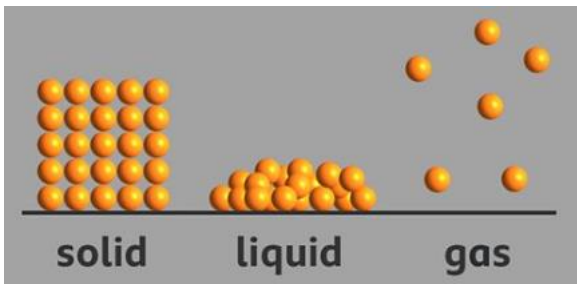


CLASS – VIII
MID TERM EXAMINATION – 2025-26
SUBJECT – CHEMISTRY
SET-B1/B2(SOLUTIO)

MM-20

Q1(i),(ii),(iii) and Q2 carry one mark each
Q3 and Q4 carry 2marks each
Q5 carry 3 marks
Q6 carry 4 marks
Q7 carry 5 marks

SET BI	SET B2	VALUE POINT	MARKS
Q1	Q1	Q1. MULTIPLE CHOICE QUESTION- (i) Naphthalene balls are used as (a) mosquito repellent (b) moth repellent (c) snake repellent (d) bee repellent (ii) Which of the following is the purest form of carbon? (a) Coal gas (b) Coal tar (c) Coke (d) None of the above (iii) What are interparticle spaces? (a) Gaps between chalk pieces (b) Spaces between particles of matter (c) Cracks on solids (d) Spaces in containers B2 (i)PCRA stands for- (a) Public Conservations Research Association (b) Petroleum Conservation Research Association (c) Public Council of Research Association (d) Partial Counting of remaining Amendment (ii)When coal burns in air then (a) Carbon dioxide is formed (b) Sulphur dioxide is formed (c) Carbon monoxide is formed (d) Hydrogen gas is formed	1 1 1

Q2	Q2.	.For question numbers 2 two statements are given- one labelled Assertion (A) and the other labelled Reason (R) Select the correct answer to these questions from the codes (a), (b), (c) and (d) as given below- a) Assertion and reason both are correct statement and reason is correct explanation for assertion. b) Assertion and reason both are correct statement and reason is not correct explanation for assertion. c) Assertion is correct statement but reason is wrong statement. d) Assertion is wrong statement but reason is correct statement ASSERTION: Solids have a fixed shape REASON: They do not melt and have more mass ANSWER-(c)	1
Q3	Q4	Draw a picture representing particle present in the following- (i) Aluminium foil (ii) Glycerine (iii) Methane gas B2 (i) Gold foil (ii) Milk (iii) Carbon dioxide ANSWER 	
Q4	Q3	Give reason- (a) Gases mix easily, while solids do not. (b) When spilled on the table, milk in a glass tumbler, flows and spreads out, but glass tumbler stays in the same shape. ANSWER -(a) Gases have very weak attractive forces between their molecules, allowing them to move freely and spread out to fill any available space. Solid particles are held together by strong attractive forces, making it difficult for them to move past each other and mix (c) When milk is spilled on a table, it flows and spreads out due to its fluid nature, while the glass tumbler, being a solid, maintains its shape. This	2

		difference in behavior is explained by the properties of liquids and solids. Liquids, like milk, can flow and conform to the shape of their (d) container, whereas solids, like a glass tumbler, have a fixed shape and volume. OR Why does the water in ocean taste salty, even though salt is not visible? Explain ANSWER-Ocean water tastes salty because it contains a large amount of dissolved salts, primarily sodium chloride, which is the same as table salt. While these salt particles are microscopic and evenly distributed, their presence is what gives seawater its characteristic salty taste. The spaces between water molecules allow these salt particles to disperse and dissolve, making the salt invisible to the naked eye but still present in the water	
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Q5	Q5.	Coal and petroleum are both fossil fuels formed from the remains of living organisms. However, they have different origins and are used for different purposes. (a) Explain the primary difference in the origin of coal and petroleum. (b) Describe two uses of petroleum products. (c) Why are coal and petroleum considered exhaustible resources? Answer: (a) Origin Difference: Coal is formed from the remains of terrestrial vegetation (like trees and ferns) that accumulated in swamps and peat bogs millions of years ago. Over time, this plant material was buried under layers of sediment and subjected to heat and pressure, transforming it into coal. In contrast, petroleum and natural gas are formed from the remains of tiny marine organisms (like algae and plankton) that settled at the bottom of seas and oceans. These remains were also buried under layers of sediment and subjected to heat and pressure, forming petroleum and natural gas. (b) Two Uses of Petroleum: • Fuel: Petroleum products like petrol, diesel, and kerosene are used as fuels for vehicles, heating, and power generation. • Lubricants: Petroleum-based lubricants like lubricating oil are used to reduce friction in machines and engines. • Other uses: Petroleum is also used to produce plastics, waxes, and other valuable materials. (e) Exhaustible Resource: Coal and petroleum are considered exhaustible resources because they are formed over millions of years from the remains of ancient organisms. The rate at which they are consumed is significantly faster than the rate at which they are formed. Therefore, they are finite resources and can be depleted if used at an unsustainable rate. OR Radhey prefers to go to school by pooling car. On other occasions he like to opt for public transport rather than private transport. For short distances, he walks or uses bicycle. (a) What are the benefits of carpooling? (b) Which mean of transport do you think is best for short distances? (c) How on our end we can reduce the consumption of fossil fuels? ANSWER- (a) • Cost effective • Reduces pollution • Reduces traffic on roads • Saves fossil fuels (b) Bicycle (c) • By reducing use of plastics as these are products of fossil fuels. • By consuming electrical energy judiciously as most of the electricity comes from burning coal. • By carpooling. As car uses petrol or diesel—a form of fossil fuel. • Switching engine off at red lights.	3
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Q6	Q6.	The diagram illustrates the diffusion of potassium manganate (VII) crystals in water. It is divided into three stages: Initial State: A beaker contains water molecules (represented by blue circles with two smaller circles) and crystals of potassium manganate (VII) (represented by purple clusters) at the bottom. Labels include "WATER MOLECULE", "POTASSIUM MANGANATE (VII)", "WATER", and "CRYSTALS OF POTASSIUM MANGANATE (VII)". After 15 Minutes: The solution is now pink. A concentration gradient is shown with a graph of "CONCENTRATION" vs "POSITION" (A, B, C, D). The concentration is highest at A and decreases towards D. A text box states: "POTASSIUM MANGANATE MOLECULES DIFFUSE THROUGH THE SOLUTION, FROM A REGION OF HIGH CONCENTRATION TO A REGION OF LOW CONCENTRATION". After 4 Hours: Equilibrium is reached. The solution is a uniform pink color. A text box states: "POTASSIUM MANGANATE (VII) SOLUTION AFTER 4 HOURS — EQUILIBRIUM IS REACHED". Another text box states: "CONCENTRATION OF PARTICLES NOW EVENLY SPREAD THROUGH THE SOLUTION". Observe the above diagram and answer the following questions (a) On which property above diagram is based? ANS- Movement of particle (b) What is the effect of temperature on potassium permanganate crystal? ANS- It dissolves faster (c) Why the entire bulk of water acquires a uniform pink color? ANS- Because water particles are in constant motion, they pull out the particles of potassium permanganate from the grain and then they spread out throughout the liquid. OR	1 1 2
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		(c) Why many substances are insoluble in water? ANS- Because the constituents particles are held together strongly that the water particles are not able to pull them out.	2
Q7	Q7.	What are the differences between the three states of matter?(based on interparticle spacing, packing of particle, interparticle attraction, movement of particle ,shape) ANS- Solid: • Interparticle spacing: Very small, particles are tightly packed together. • Packing of particles: Highly ordered, particles are fixed in position relative to each other. • Interparticle attraction: Strong, due to close proximity of particles. • Movement of particles: Vibrate slightly around fixed positions. • Shape and volume: Definite shape and definite volume. Liquid: • Interparticle spacing: Moderate, particles are closer than in a gas but not as tightly packed as in a solid. • Packing of particles: Less ordered, particles can move past each other. • Interparticle attraction: Moderate, weaker than in solids but stronger than in gases. • Movement of particles: Relatively free movement, particles can slide past each other. • Shape and volume: Definite volume, but takes the shape of its container. Gas: • Interparticle spacing: Very large, particles are far apart. • Packing of particles: Highly disordered, particles are constantly moving randomly. • Interparticle attraction: Weak, due to large distances between particles. • Movement of particles: High speed, random movement in all directions. • Shape and volume: No definite shape or volume, expands to fill the container	5