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Federal Board SSC-I · Chemistry Past Paper Questions

Class 10 | Unit 2 : MATTER (Chapter 2)

ANSWER KEY

PAPER 1 — 2025, 1st Exam Set 1

SECTION A — MCQ

Q1 (10). Which statement about water is correct? A) Low heat capacity B) Low heat of vaporization C) Contracts when freezes D) Boils at 100 °C

Ans: (D) Boils at 100 °C (at normal pressure). Water has HIGH heat capacity, HIGH heat of vaporization, and it EXPANDS on freezing.

SECTION B — Short Questions (Q2)

Q2 (ii) Water has maximum density at 4 °C. How does it help the aquatic life to survive in winter? [3]

(1) In winter the surface water cools, becomes denser and sinks. This goes on until the whole water body reaches 4 °C.

(2) Below 4 °C water becomes less dense, so it stays on top and only the surface freezes at 0 °C.

(3) The ice layer is a poor conductor of heat, so it insulates the water below. That water stays liquid (about 4 °C) and aquatic life survives.

SECTION C — Long Questions

Q6 (OR). Discuss importance of water. (Any four points) [4]

(1) Universal solvent: it dissolves many substances, so nutrients, gases and wastes are carried in blood and cells.

(2) Essential for life: about 70% of the human body is water; it is needed for digestion and all body reactions.

(3) Temperature control: high heat capacity and high heat of vaporization keep body and climate temperature steady (sweating cools the body).

(4) Plants and agriculture: water is needed for photosynthesis and for irrigation of crops.

(Other points: aquatic habitat, industry, hydroelectric power, transport, cleaning and domestic use. Write any four.)

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PAPER 2 — 2025, 1st Exam Set 2

SECTION A — MCQ

Q1 (10). Which statement about water is WRONG? A) High heat capacity B) High heat of vaporization C) Minimum density at 4 °C D) Boils at 100 °C

Ans: (C) Minimum density at 4 °C. Water has MAXIMUM density at 4 °C, so this statement is wrong.

SECTION B — Short Questions (Q2)

Q2 (ii) Why does ice float on the top of water? Describe its benefit. [3]

(1) On freezing, water molecules form an open hexagonal structure held by hydrogen bonds, with empty spaces between them.

(2) The volume increases (about 9%), so ice is less dense (0.92 g/cm^3) than liquid water (1 g/cm^3) and floats.

(3) Benefit: floating ice forms an insulating layer on the surface. The water below does not freeze, so aquatic life survives in cold weather.

SECTION C — Long Questions

No Chapter 2 question.

PAPER 3 — 2025, 2nd Exam

SECTION A — MCQ

No Chapter 2 question.

SECTION B — Short Questions (Q2)

Q2 (ii) (OR) How aquatic life survives under water during extreme cold weather? [3]

(1) Water is most dense at 4 °C, so cooled surface water sinks until the whole body is at 4 °C.

(2) Further cooling makes water lighter, so it stays on top and freezes at 0 °C. Ice is less dense and floats.

(3) Ice is a poor conductor of heat and insulates the water below. The lower water stays liquid at about 4 °C, so fish and other aquatic life survive.

SECTION C — Long Questions

No Chapter 2 question.

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PAPER 4 — 2026 (B)

SECTION A — MCQ

Q1 (2). In sublimation, a substance changes directly from: A) Gas to liquid B) Solid to liquid C) Liquid to gas D) Solid to gas

Ans: (D) Solid to gas, without passing through the liquid state (e.g. dry ice, iodine, naphthalene).

PAPER 5 — 2026 (D)

SECTION A — MCQ

Q1 (2). Change in state of a substance from gas to liquid is called: A) Freezing B) Sublimation C) Condensation D) Deposition

Ans: (C) Condensation.

PAPER 6 — 2026 (M)

SECTION A — MCQ

Q1 (2). With the increase in temperature, the change of liquid into gas is called: A) Sublimation B) Melting C) Boiling D) Freezing

Ans: (C) Boiling.

PAPER 7 — Model Paper (FBISE)

SECTION A — MCQ

Q1 (i). A student places a piece of dry ice (solid CO_2) in a sealed container. After a while, the container expands and may even burst. What is the best explanation for this? A) The dry ice melted and turned into liquid, increasing volume. B) The dry ice reacted with oxygen to form new compounds. C) The dry ice sublimed, producing gas that increases pressure. D) The container absorbed external heat, causing it to burst.

Ans: (C) The dry ice sublimed, producing gas that increases pressure. Solid CO_2 changes directly into gas; in a sealed container the gas cannot escape, so the pressure builds up.

— End of Answer Key —

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