Answer Key

Chapter 1 — Nature of Science in Chemistry

Quick MCQ Answer Table

Paper	Question	Answer
Paper 1	Q1(i)	**B**
Paper 2	Q1 (Version B)	**B**
Paper 2	Q1 (Version D)	**D**
Paper 4	Q1	**A**
Paper 5	Q41	**B**
Paper 5	Q42	**B**
Paper 5	Q43	**A**
Paper 5	Q44	**B**
Paper 8	Q1	**B**

Answers follow the textbook (Unit 1). Papers are in the same order as the question file. Detailed answers for short questions follow on the next pages.

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Paper 1 — Model Paper 2025

FBISE Model Paper · Curriculum 2022-23

MCQ

Q1(i). **B** — The study of carbon-based molecules and their reactions

Short Questions

Q2(x) OR. Define the following branches of chemistry:

a. **Astrochemistry:** The branch of chemistry that deals with the study of chemical processes and reactions that occur in astronomical environments, such as stars, planets, comets and interstellar space.

b. **Geochemistry:** The branch of chemistry that deals with the study of chemical composition, distribution and transformation of elements and compounds in the Earth's crust, such as rocks, minerals, soils, water and the atmosphere.

c. **Physical chemistry:** The branch of chemistry that deals with laws and theories to understand the structure and changes of matter.

Paper 2 — 2025, 1st Exam Paper 1

Footer codes 1SA-I 25005 (B) and (D)

MCQs

Q1 (Version B). **B** — Analytical Chemistry

Q1 (Version D). **D** — Geo Chemistry

Short Questions

Q2(xi) OR (Version B). Briefly describe the following:

a. **Analytical chemistry:** The branch of chemistry that deals with the methods and instruments for determining the composition and properties of matter.

b. **Medicinal chemistry:** The branch of chemistry that deals with the study of the interaction between drugs and biological targets, as well as the development of new medicinal agents.

c. **Inorganic chemistry:** The branch of chemistry that deals with elements and their compounds except organic compounds.

Paper 3 — 2025, 1st Exam Paper 2

Footer code 1SA-I 25005 (D)

Short Questions

Q2(iv) OR. Briefly describe the following:

a. **Nuclear chemistry:** The branch of chemistry that deals with the changes that occur in atomic nuclei.

b. **Environmental chemistry:** The branch of chemistry that deals with the study of chemical and toxic substances that pollute the environment and their adverse effects on human beings.

c. **Astro chemistry:** The branch of chemistry that deals with the study of chemical processes and reactions that occur in astronomical environments, such as stars, planets, comets and interstellar space.

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Paper 4 — 2025, 2nd Exam

Footer code 1SA-II 25005

MCQ

Q1. **A** — Biochemistry

Short Questions

Q2(xi) OR. Differentiate between ‘Organic chemistry’ and ‘Inorganic chemistry’:

Organic chemistry	Inorganic chemistry
Deals with substances containing carbon	Deals with elements and their compounds except organic compounds
Carbonates, bicarbonates, oxides and carbides of carbon are excluded	Carbonates, bicarbonates, oxides and carbides of carbon are studied here
Examples: medicines, plastics, carbohydrates	Examples: Li-ion batteries, metals and their salts

Paper 5 — Model Paper 2026 (50% MCQs)

FBISE Model Paper · National Curriculum 2022-23

MCQs

Q41. **B** — Biochemistry

Q42. **B** — Organic Chemistry

“Medicinal Chemistry” is not among the options; Organic Chemistry is the closest answer, because organic chemists synthesize new medicines.

Q43. **A** — Nuclear Chemistry

Q44. **B** — Different branches of chemistry focus on different types of problems and applications

Short Questions

Q6 (OR). Define Chemistry:

Answer: Chemistry is the science that investigates the materials of the universe and the changes that these materials undergo. It deals with the composition, structure, properties, behavior and changes of matter and energy.

The states-of-matter part of this question belongs to Chapter 2.

Paper 6 — 2026 (D)

Footer code 1SA-I 26005 (D)

Short Questions

Q2(i). Identify the branch of chemistry:

a. Boyle’s law, pressure and volume of a gas: **Physical chemistry**

b. Industries produce SO_2 which cause acid rain: **Environmental chemistry**

c. Keratin, a protein essential for hair growth: **Biochemistry**

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Paper 7 — 2026 (M)

Footer code 1SA-I 26005 (M)

Short Questions

Q2(i). Identify the branch of chemistry:

a. Earth's temperature rising due to increased CO_2: **Environmental chemistry**

b. Contact process for sulphuric acid on large scale: **Industrial chemistry**

c. A gas liquefies when cooled to −273°C: **Physical chemistry**

Paper 8 — 2026 (B)

Footer code 1SA-I 26005 (B)

MCQ

Q1. **B** — Matter and its interactions

Short Questions

Q2(i). Identify the branch of chemistry:

a. Large scale production of NH_3 by Haber's process: **Industrial chemistry**

b. Breakdown of glucose gives energy to our body: **Biochemistry**

c. CFCs in refrigerators linked to ozone depletion: **Environmental chemistry**

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