

EXAMPLE GRAMMAR SCHOOL

ESAT Mock: Mark Scheme

Chemistry

Paper SMP-2026-09 • Version 1.5

Answer grid

Q	Ans	Q	Ans	Q	Ans
1	E	10	D		
2	D				
3	A				
4	G				
5	E				
6	B				
7	H				
8	D				
9	A				

Totals

10 marks available, 1 mark per question. There is no negative marking, so a wrong answer scores zero and never a negative. Only the answer sheet is marked.

Diagnostic table

Use this to see which topics the cohort is losing marks on.

Q	Ans	Node	Group	Topic	Difficulty
1	E	C1.3	C1	Know and be able to use the terms atomic number and mass number, together with standard notation (e.g. $^{12}_6\text{C}$), and so be able to calculate the number of protons, neutrons and electrons in any atom	★★☆☆☆
2	D	C11.1	C11	Energetics	★★☆☆☆
3	A	C4.1	C4	Quantitative chemistry	★★☆☆☆
4	G	C2.4	C2	The Periodic Table	★★☆☆☆
5	E	C7.1	C7	Groups 1, 17 and 18	★★☆☆☆
6	B	C4.8	C4	Quantitative chemistry	★★☆☆☆
7	H	C3.4	C3	Chemical reactions and equations	★★☆☆☆
8	D	C8.2	C8	Separation techniques	★★☆☆☆
9	A	C4.1	C4	Quantitative chemistry	★★☆☆☆
10	D	C2.2	C2	The Periodic Table	★★☆☆☆

Marks available by topic group

Group	Topic	Marks
C1	Atomic structure	1
C2	The Periodic Table	2
C3	Chemical reactions and equations	1
C4	Quantitative chemistry	3
C7	Groups 1, 17 and 18	1
C8	Separation techniques	1
C11	Energetics	1
Total		10

Worked solutions for every question are in the separate worked solutions document.

Questions 11 to 27 are in the full paper

This is an extract. The 10 questions before this page are real questions from a commissioned worked solutions, shown in full and with nothing withheld, so that the standard can be judged rather than described.

The rest of the paper is not hidden behind this page. It was never in this file. Each commissioned paper is written for one school, recorded against it, and issued to no other, so the questions in it are not published anywhere, including here.

A commissioned paper is NOT this paper with the missing questions restored. Every question in it is different from every question here, the 10 shown above included. Your school's paper is drawn fresh, and no question that has ever been published, on this page or anywhere else, can appear in it.

A full paper runs to 27 questions in this module alone, with a question paper, an answer sheet, a mark scheme and a worked solution for every question, across all five ESAT modules.

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Written by researchers in engineering, physics and mathematics at Oxford and Cambridge, and checked question by question before it is issued.