

CHEMISTRY

Paper 1523/12
Multiple Choice (Core) 12

Question Number	Key	Question Number	Key	Question Number	Key	Question Number	Key
1	C	11	C	21	A	31	C
2	C	12	D	22	B	32	A
3	A	13	B	23	A	33	A
4	C	14	B	24	A	34	D
5	B	15	B	25	B	35	B
6	B	16	A	26	A	36	D
7	C	17	C	27	B	37	B
8	A	18	D	28	D	38	C
9	B	19	D	29	A	39	D
10	D	20	B	30	D	40	C

General comments

This paper had few candidates. The candidates found **Questions 1, 26 and 40** least challenging. **Questions 3, 5, 8, 32, 33, 36 and 39** were the most challenging. For the most challenging questions, candidates were often less likely to choose the correct answer than would be predicted by guessing alone.

Comments on specific questions

Question 2

Most candidates found this question difficult, perhaps assuming that the experiment was to determine a reaction rate. Distractor **D** requiring the use of a stop-watch was the most common error.

Question 3

Most candidates did not recognise that water must enter the condenser from the bottom. For weaker candidates, distractor **B** was the most common answer. Stronger candidates were less likely to make this error but were more likely to confuse solvent and solute and choose distractor **C**.

Question 5

Most candidates recalled that melting points are depressed by impurities. The most common error was to assume that boiling points were also depressed. Distractor **A** was the most common answer.

Question 8

None of the candidates chose distractor **C**. The most common answer was distractor **B**. Candidates must take care to read the question carefully. The question showed the electronic structure of the atom, but the question asked for the ion.

Question 16

Few candidates chose distractor **C** showing good understanding of the link between temperature and rate. More able candidates recognised the faster rate using smaller pieces but many did not consider that the volume of gas produced would be the same and so chose distractor **D**. Weaker candidates recognised the greater volume but not the faster rate and were more likely to choose distractor **B**.

Question 20

In this recall question, the more able candidates overall were less likely to give the correct answer. The most common answer in this more able group was distractor **A** whereas the less able overall were more likely to give the correct answer than any other.

Question 27

Nearly all the most able candidates found this question least challenging. The least able were more likely to give any other answer.

Question 32

This question was not well answered. Fewer candidates chose the correct answer than may be expected from guessing. The most popular answer was distractor **B** suggesting confusion between acidic and alkaline soils and their treatments.

Question 33

This question discriminated well between the most and least able. None of the least able answered this question correctly, with most choosing distractor **D**.

Question 34

This question discriminated well between the most and least able. None of the least able answered this question correctly, with most choosing distractor **B**.

Question 36

Fewer candidates answered this correctly than would be expected by guessing alone. Distractor **A** was the most common incorrect answer. Candidates should know that fractional distillation results in a separation of chemicals rather than a chemical reaction.

Question 37

Most candidates recalled that alkanes did not have double bonds throughout the structure but none of the less able candidates were able to identify the correct answer. Distractor **D** was the most common incorrect answer.

Question 39

Fewer candidates answered this correctly than would be expected by guessing alone. Distractor **B** was the most common incorrect answer. Candidates should recall that although ethanoic acid is a weak acid, it shares similar reactions with other acids on the syllabus including those with metals and metal oxides.