



General Certificate of Education

General Studies 5761 *Specification A*

GSA2 Science, Mathematics and Technology

Report on the Examination *2007 examination - January series*

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Unit 2 Section 1 (GSA2/1 Science, Mathematics and Technology)

This component is an objective test for which the following list indicates the correct answers used in marking the candidates' responses.

1	C	14	A
2	D	15	C
3	A	16	C
4	C	17	B
5	B	18	B
6	A	19	D
7	C	20	A
8	C	21	D
9	B	22	D
10	D	23	D
11	B	24	B
12	D	25	A
13	C		

Section 1

(Questions 1 – 25)

The overall facility was slightly lower than in recent series, with a mean of 61%, and the number of questions having a facility of 65% or more fell from 14 in January 2006 to 11 (Questions 1, 6, 8, 9, 13, 14, 15, 17, 20, 21 and 22) in this series. There was just one question (10) with a facility under 35%, whereas there were none this time last year. The overall level of discrimination between candidates was better than in all other Unit 2, Section 1 papers in recent years.

General Comments

- Question 3** This was found to be difficult, for only 36% realised that the change would be of factor 4, with nearly as many thinking it would be of factor 2, as if the quantities were in direct proportion.
- Question 4** Only just over half the candidates selected the correct response, with over one third selecting distractor B, 12 ohms, assuming values were in proportion, as in Question 3, noted above.
- Question 7** This had a facility of 36%, but half of all candidates selected distractor A, the other extreme value, failing to realise the significance of gases dropping in temperature. This was the only question having a distractor more popular than the correct response.
- Question 9** Most candidates knew that plasticine is not a ceramic, and most incorrect responses were for brick.
- Question 10** Most candidates found this question hard, having a facility of 32%, but the overall discrimination was still satisfactory as two thirds of the stronger candidates selected the correct response. The proportions of candidates selecting each of the other responses were approximately equal.
- Question 11** Although half the candidates were able to answer this question correctly, it was the only question for which the discrimination between candidates was not as strong as would normally be expected. However, there was still evidence that the stronger candidates were more successful than others in selecting the correct response.
- Question 12** The majority of candidates (58%) selected the correct response, and difficulties for the others arose when considering statements **3** and **4**, as C was clearly the most popular distractor. It may be presumed that some candidates do not understand the significance of 'permanent' when used in the context of magnets and magnetism. The discrimination for the question was still good however.
- Question 16** 59% selected the correct response and D was the most popular distractor. It would appear that candidates may have been 'word spotting' and not reflecting on the descriptions in the passage. Again the question discriminated satisfactorily.

- Question 18** Half the candidates selected the correct response, but nearly one quarter selected A, unable to establish the relative size of the units, and a similar proportion selected C, perhaps just noting the 100 in the text, and not actually answering the question.
- Question 19** Approximately 40% selected the key D, with responses A and C being approximately equally popular, and with very few selecting B.
- Questions 24 and 25** While virtually all candidates knew or could establish that the assertions were correct, only about half were able to identify the appropriateness of the reasons, with a significant proportion selecting the incorrect responses from A, B and C in each question.

Unit 2 Section 2 (GSA2/2 Science, Mathematics and Technology)

This component is an objective test for which the following list indicates the correct answers used in marking the candidates' responses.

26	A	39	A
27	C	40	B
28	A	41	C
29	C	42	B
30	C	43	C
31	C	44	B
32	A	45	D
33	D	46	B
34	C	47	B
35	A	48	D
36	D	49	D
37	B	50	D
38	C		

Section 2

(Questions 26 – 50)

The overall facility of 53% was very much in line with recent examination series, although 2% lower than for this section in January 2006. Five questions (Questions 31, 35, 37, 38 and 39) had a facility greater than 65% and two (Questions 33 and 45) had a facility of 35% or less. All questions discriminated satisfactorily or better, and the overall level of discrimination between stronger and weaker candidates was extremely good.

- Question 28** Although the key was the most popular response, fewer than half of all candidates selected it, and nearly 40% selected distractor C in which the decimals and indices were just added independently. This question discriminated extremely well however.
- Question 29** As for Question 28, the key was again the most popular response (48%) but nearly half of all candidates selected B or D, indicating that they were unable to establish which number should be divided by which.
- Question 30** Approximately 50% of all candidates selected the key, with most incorrect answers being B, but more than 1 in 8 candidates chose response D, averaging the frequencies.
- Question 33** Only 35% of candidates selected the correct response, with over half of all candidates selecting A and indicating that they were not taking any account of the heading of the table, and failing to note that the figures were not 'total deaths'. (This was the only question in which a distractor proved to be more popular than the key.)
- Question 37** Although a clear majority (69%) of candidates selected the correct value for the height, the vast majority of the remaining candidates selected D, so the height remained 2 cm shorter than the length (as before the enlargement).
- Question 40** Although 51% selected the key, nearly one third of candidates selected response C as an odd integer, and failing to reflect that this was a multiple of 2 and that it must have been an even number by definition.
- Question 45** This question had the lowest facility on the paper, at 29%, but it still discriminated well. Incorrect answers were fairly evenly spread across the other three responses.
- Questions 49 and 50** Slightly less than half of all candidates selected the correct response for Question 49, and one third of candidates selected B, indicating that they were attracted to the visual image of a graph increasing by constant amounts to illustrate growth of a fixed percentage. In contrast, 64% selected the key in Question 50, and the total number of candidates selecting A and B (the only two descriptive statements including an option of growth by the same amount each year) was less than 15%.

Mark Ranges and Award of Grades

Grade boundaries and cumulative percentage grades are available on the [Results statistics](#) page of the AQA Website.