



General Certificate of Education

General Studies 5761 *Specification A*

GSA2 Science, Mathematics and Technology

Report on the Examination *2009 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	A	14	D
2	D	15	A
3	B	16	C
4	A	17	D
5	D	18	B
6	A	19	B
7	C	20	D
8	D	21	B
9	C	22	B
10	B	23	C
11	D	24	C
12	B	25	A
13	A		

Section 1

(Questions 1 – 25)

This passage proved to have a very similar demand to that of the January 2008 examination, with a mean facility of 73%. Although only a minority of questions had a facility less than 65% (questions 5, 9, 10, 14, 17–20 and 23) all questions discriminated between the most and least able, even those with the highest facility, and many discriminated well. Once again no question had a facility below 35% and no questions had any distractors being more popular than the correct response.

Notes on individual questions

Question 1: This proved to be a most accessible first question on the paper, as nearly 90% of candidates selected the correct response, which probably explains why the discrimination was not as good as would normally be expected for individual questions. However there was still evidence that the more able candidates performed better than the weaker candidates.

Question 5: Mathematical questions proved to be some of the more difficult on the paper. In this case many candidates selected a response from a ratio using 14 and 23 as given in the table for dilan, rather than using the figure of 77% which represented the decline over the given time period.

Question 7: Three quarters of all candidates were able to select the correct response, with most of the remainder selecting A, realising the significance of the dots in the diagram, but not the length of the bar.

Question 9: The response here was similar to that in Question 5, for while approximately half of all candidates selected the correct response, half of the remaining candidates selected option A in which no allowance had been made for the figure being the reduction in the shell thickness.

Question 10: In this question the vast majority of incorrect responses were for D, as these candidates failed to appreciate the significance of biomagnification.

Question 13: This question was one of the weakest in discriminating between candidates of differing abilities, but nevertheless there was still clear evidence that in general more of the stronger candidates were selected the correct response than of the weaker candidates.

Question 14: Approximately 60% of candidates selected the correct response, with a clear majority of those failing to do so selecting option B.

Question 19: This question was the least effective at discriminating between the more and less able candidates, with many candidates opting for D rather than the key of B. However, as with other questions, there was still evidence of some correlation with ability. While many might feel that D is a reasonable response, it would not be in line with the precautionary principle, which should allow opportunities for scientists to do further work to obtain some more conclusive results.

Question 20: In this question most candidates could identify points 1 and 2 within the passage but from the responses candidates found points 3 and 4, which were also correct, harder to pick out.

Question 24: While three quarters of all candidates were able to select the correct response, most incorrect responses were for B, as candidates presumably drew an unreasonable conclusion regarding the USA from the information in **Box 2**.

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

Section 2

(Questions 26 – 50)

As for Section 1, this section had a very similar facility to the January 2008 paper of 58%, just 1% point lower than last year. Questions 26, 27, 28, 32, 35, 36, 43, 45 and 48 had a facility of 65% or more and no questions had a facility of less than 35%. All questions discriminated satisfactorily, and often very well, and no question had a distractor more popular than the correct response.

Notes on individual questions

Question 26: About two thirds of all candidates selected the correct response, and by far the most popular error was option B for which candidates had not taken account of the populations of the differing countries.

Question 31: Less than half selected the correct response to this question, with virtually all other candidates being approximately equally split between options B and C.

Question 32: It was good to note that 90% of candidates could select the correct response here and virtually all candidates focused on the change in speed, for there were extremely few candidates selecting option C when the speed was maximum.

Question 34: This question had a success rate of nearly 60%, with most of those making a mistake believing that if the prices increased by the same percentage then the difference between them would remain the same.

Question 38: It would appear that many candidates found this question hard, for less than half were able to select the correct response and other candidates were fairly evenly spread across the other responses.

Question 40: Approximately the same number of candidates selected response A as selected the correct response, presumably failing to read the question correctly.

Question 44: This would appear to be another question which many candidates found difficult, for although nearly half of all candidates selected the correct response, the remaining candidates were fairly evenly divided between the alternative answers.

Question 46: This question was answered correctly by nearly 60% of candidates with the majority of the others selecting either option B or option C.

Question 49: As might be expected, the most popular incorrect response for this question was option D, in which candidates just read off the value against a mark of 40, although a significant minority also selected each of the other two incorrect responses.

Question 50: 44% of candidates were able to select the correct response to the final question, but over one third selected option A, perhaps indicating they believe the common misconception that when two numbers are multiplied together the product is larger than the original numbers.

Mark Ranges and Award of Grades

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