



General Certificate of Education

General Studies 1761 *Specification A*

GENA2 Science and Society

Report on the Examination *2010 examination - January series*

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Unit 2 Section A

(GENA2 AS Science and Society)

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

1.1	C	1.16	B
1.2	B	1.17	B
1.3	D	1.18	C
1.4	A	1.19	D
1.5	D	1.20	D
1.6	D	1.21	A
1.7	A	1.22	C
1.8	B	1.23	C
1.9	D	1.24	B
1.10	A	1.25	C
1.11	D	1.26	C
1.12	B	1.27	B
1.13	D	1.28	A
1.14	A	1.29	D
1.15	D	1.30	C

Unit 2 Section A

(Questions 1.1 – 1.25)

The items for the examination this January appeared to be a little more accessible than in previous sessions and the overall facility was 63%.

Half the questions had a facility of 65% or more.

1.1, 1.3, 1.4, 1.6, 1.8, 1.10, 1.12, 1.13, 1.18, 1.20, 1.24, 1.26, 1.28, 1.29 and 1.30.

Only one question, 1.21, had a facility below 35% and this was the only item with a distractor being more popular than the key. (See below.)

Two questions discriminated less well than had been hoped, 1.10 and 1.25, although this was marginal for 1.10 and in both cases there was still evidence that stronger candidates were more successful than weaker candidates in selecting the correct responses.

Notes on individual questions

Question 1.5

41% of candidates correctly realised that all the suggested changes were valid, with 32% selecting option C, presumably not realising that adrenalin (stated in the passage) is a hormone.

Question 1.6

While 79% of candidates selected the correct response, pistol shooting attracted the vast majority of incorrect responses.

Question 1.10

This was answered correctly by 85% of candidates, (with relatively little difference between males and females). Most incorrect responses were for option B.

Question 1.15

While more candidates gave the correct response to the question than to any of the distractors, nearly as many opted for C, not knowing that glycogen is a carbohydrate.

Question 1.17

This question was answered correctly by significantly more female candidates than male candidates, with most incorrect responses being divided between A and C.

Question 1.21

This question discriminated very well, but apart from some stronger candidates relatively few of the others selected the correct response, with option B (having the attraction of its significant figures coming from 60% and 6) proving the most attractive, especially for weaker candidates.

Unit 2 Section B

General Comments

The specification covers both science and society and the examination questions all attempt to include both of these elements of the specification. All questions are in two parts, and the pattern of questions is that the first part focuses primarily on scientific issues while the second part focuses on social, economic, political or ethical issues related to the topic.

Each part of the question was marked separately, with part (a) being allocated 17 marks, and part (b) being allocated 18 marks. Marks were allocated for content based on Assessment Objectives AO1, AO2 and AO3 and for communication based on Assessment Objective AO4. Examiners were encouraged to use the full mark range available.

The questions include a short piece of source material, which is intended to act as a stimulus to candidates and which they may be able to refer to in their answers. However, the questions do not require source analysis, and candidates are expected to answer the questions using predominantly their own knowledge. The wording of the questions usually gives a clear indication of how candidates might structure their answers.

The distribution of responses to the questions in this examination was broadly similar in the majority of centres, with the following distribution across the whole of the entry:

Question 2	Question 3	Question 4
11%	62%	27%

In general, examiners felt that the standard of responses was good, though there was some variation from centre to centre. The better answers were well structured, with clear paragraphs, an introduction and conclusion, used relevant examples, and focused clearly on the actual question. Some weaker candidates did little more than paraphrase the source in their answers.

Marks for part (b) of the questions tended to be slightly higher than for part (a). This seems to be associated with the fact that a higher level mark for part (a) requires some significant explanation of scientific principles and issues. Centres should ensure that candidates are fully aware of the need for scientific content in this part of the question, as well as the need for social, political and economic content in part (b).

Question 2(a)

Examiners were expecting an understanding of the concept of genetic modification, some detail on the process involved and an indication of the purposes for which it might be used.

Answers to this question were disappointing, as a significant proportion of candidates did not understand the concept of 'genetic modification' of crops, and even fewer were able to explain any detail of the process or its applications. Far too many thought that genetic modification was simply an agricultural technique and wrote in general terms about the use of pesticides, fertilisers and, even more vaguely, 'chemicals'.

Question 2(b)

The question was looking for a balanced discussion of the benefits and risks of GM crops. Candidates were often able to write persuasively of the possibilities of increased yields and the

use of crops in, for example, otherwise infertile conditions. However, the lack of detailed understanding of GM showed in a lack of comment on the more specific concerns about the impact on non-GM crops and possible, as yet unknown, health consequences of human consumption of genetically modified ingredients.

Question 3(a)

Question 3 was, by some margin, the most popular question on the paper. Examiners were pleased to note that, for 3(a), many candidates produced well-informed answers with an understanding of the major health risks associated with smoking, backed up with a significant amount of science detail. Weaker candidates could usually identify links between smoking and health, but failed to explain them.

Question 3(b)

This question required a balanced discussion of the effectiveness and acceptability of anti-smoking measures, and some suggestions for potential future measures. Most candidates produced a useful discussion on the effectiveness of the measures given in the source – though often with widely differing opinions. However, too many answers failed to go on to consider the acceptability of these measures or to consider potential measures. Candidates who did answer the question in full tended to get the higher marks.

Question 4(a)

Answers to this question were expected to cover reasons for the expansion of the amount of waste generated and the difficulties associated with the use of landfill and incineration. Some candidates restricted themselves to narrowly-based answers on space for landfill and undefined 'fumes' from incineration. Others wandered off into (often inaccurate) accounts of global warming, with little or no relevance to the question. Better answers understood the social background to waste generation and explained some of the problems of disposal in scientific terms.

Question 4(b)

Good responses to this question demonstrated that candidates had read the question carefully and structured their answers accordingly. Such answers were wide-ranging, made links between government, manufacturers and the public, and reached a thoughtful conclusion. Weaker answers were restricted to a limited discussion of recycling and packaging.

Mark Ranges and Award of Grades

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