



**General Certificate of Education (A-level)
June 2012**

General Studies A

GENA2

(Specification 2760)

Unit 2: Science and Society (AS)

Report on the Examination

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

Unit 2 Section A

(Questions 1.1 – 1.30)

General

This year the passage and questions appeared to be a little harder than in recent summer examinations, as the mean facility was 61%, compared with 65% and 64% for the previous two years.

Fewer than half the questions had a facility of 65% or more (1.3, 1.4, 1.5, 1.6, 1.7, 1.9, 1.11, 1.17, 1.19, 1.24 and 1.26).

Two questions had a facility of 35% or less (1.23 and 1.25).

The overall discrimination between stronger and weaker students was very reasonable, though that for 1.2 was fractionally below what was hoped for (but with a facility of 51%) and 1.25 significantly less than had been expected (with a facility of just 27%).

Comments on individual questions

As noted above, 1.2 had a discrimination that was a little less than had been hoped for, but there was no single clear distractor attracting many students.

In 1.10, most students who failed to select the key (correct answer) opted for response A, neglecting to note that the question asked students to identify a common factor within both paragraph 11 and paragraph 12, presumably focusing solely on the factor that was clear within the second of these paragraphs (and also subsequent parts of the passage).

About half of those who failed to identify the key in 1.11 selected C (polyethene), the theme of the passage, failing to note the period stated in the passage when plastic bags first became popular.

1.12 had one distractor (B at 46%) being slightly more popular than the correct response (D at 45%) from which it would appear that students were perhaps reading the text too literally rather than noting the tone within the text. The question was asking about an implication from the text and it discriminated very well between stronger and weaker students.

1.16 required a standard mathematical calculation, yet was only answered correctly by 42% of students, with nearly as many opting for A, for which England had the largest absolute decrease. This question again discriminated well, however.

1.23 had one distractor being significantly more popular than the key (B at 59% compared with the key at 34%) from which it appears students were just reading either the question or the text too quickly, and considering plastic rather than plastic bags.

In 1.25 each of the actions has the potential to reduce the consumption of resources, but the question was specifically asking which should reduce the resources specifically for in the manufacture of plastic bags. Option A can be considered 'environmentally friendly' in that resources would be recycled, but assumes that the recycling is used to produce more plastic

bags, which is not stated in the article (and in practice is not the case) and so this was the required key. Response B proved to be more popular than the key.

In this examination the Assertion-Reason questions (1.27 – 1.30) all had a very similar facility (between 45% and 57%) with 1.28 discriminating particularly well.

Unit 2 Section B

General Comments

The specification covers both science and society, and the examination questions attempt to include both of these elements of the specification. All questions are grouped in pairs (02 and 03, 04 and 05, 06 and 07), and the student must select one pair of questions to answer. The pattern of the paper is that the first question in a pair is likely to focus primarily on scientific processes or issues, while the second question is likely to focus on social, economic, political or ethical issues related to the topic.

Each question is marked separately, with the first question being allocated 17 marks, and the second allocated 18 marks. Marks are allocated for content based on Assessment Objectives AO1, AO2 and AO3, and for communication based on Assessment Objective AO4. Examiners are 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. The questions do not require detailed source analysis, but students can refer to the source in their response and may well be able to make use of it to inform their answers. Students are, however, expected to answer the questions using predominantly their own knowledge. The wording of the questions usually gives a clear indication of how students 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:

Questions 02 and 03	Questions 04 and 05	Questions 06 and 07
39.10%	20.70%	40.20%

In general, examiners felt that all of the questions were accessible and that students engaged with them in a very positive way. For each of the pairs 04 and 05, and 06 and 07, the mean mark for the second of the two questions was higher, reflecting the extra mark that was available. This was not the case for questions 02 and 03, however, with the mean mark for 03 being more than one mark lower than that for 02.

For the most part, students seem to have been appropriately prepared for the examination. The standard of responses was generally good. The better answers were well structured, with clear paragraphs, an introduction and conclusion, used relevant examples, and focused clearly on the actual question. Weaker students often failed to respond to the actual wording of the question, and/or tended to paraphrase the source in their answers.

Particular problems that are evident in this examination are:

- (i) some students simply use and re-word information in the stimulus extract
- (ii) some students fail to read the question correctly.

It would be helpful if centres reminded students that the purpose of the extract is to stimulate thought about the questions. It may well contain useful information that can be used in one or both questions, but simply regurgitating information from the extract is unlikely to gain many marks.

The importance of reading the question carefully should be self-evident, but students should nevertheless be reminded that it could make the difference between a very good mark and a poor one.

Question 02

This question required students to explain the constituents of a healthy diet and the effects on health of different diets. Most students were able to outline the elements of a healthy diet, though with variable detail and accuracy. There was less explanation of how the different food groups contributed to good health. The explanations of diet-related problems ranged from very detailed accounts to general comments on unhealthy lifestyles.

Question 03

The source material outlined some of the recommendations of the Sustainable Development Commission report, and the question required students to develop these points and consider their possible environmental and economic impact. The more successful students used the information and structure of the source to produce clear and well-argued answers. Less successful responses often did not focus on the question, either by criticising the substance of the recommendations, or by producing a vague and general environmental commentary.

Question 04

Examiners were looking for an explanation of the transmission of genetic characteristics and disorders that would be understood by the intelligent general reader. There were many detailed responses from students who clearly had very good knowledge and understanding of the subject, though not all managed to remember the need for clarity of explanation. Other students obviously recalled the topic from their earlier studies, but often failed in their recollection of some of the detail.

Question 05

This question was asking for a discussion of the ethical issues facing anyone considering the use of genetic testing. There was useful information in the source which students could use as the basis for their discussion, and many students did produce thoughtful and mature essays on some of the issues and dilemmas involved. Weaker responses often lost focus on the actual question and diverted completely on to issues such as abortion, 'playing God' and 'designer babies'.

Question 06

This question required students to examine the uses to which robotic technology could be put. There were clear examples in the source, which most students used, but other examples, such as the use of robots in car manufacture, could reasonably have been expected. There were some excellent answers, but some students relied only on the examples in the source, while others took a very wide view of 'robots' which included toasters and coffee machines.

Question 07

Examiners were looking for a balanced discussion of the potential economic benefits of the extension of robotics (increased productivity, etc) with the possible negative social consequences (unemployment, etc). Ethical issues regarding the use of drones in warfare were another area for serious discussion. Better answers considered all of these issues and

more in a thoughtful and mature manner. Weaker answers appeared to believe that increased human laziness was a likely consequence, or looked to science fiction and the impending domination of robots over the human race.

Mark Ranges and Award of Grades

Grade boundaries and cumulative percentage grades are available on the **results statistics** page of the AQA Website - <http://www.aqa.org.uk/over/stat.html>

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