**General Certificate of Education (A-level)
June 2011**

General Studies A   **GENA2**

(Specification 2760)

Unit 2: Science and Society (AS)

Report on the Examination

Unit 2 Section

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

Unit 2 Section A

(Questions 1.1 – 1.30)

General

The passage and questions presented effectively the same level of challenge as the previous year for the mean facility for all questions was 64% in June 2010 and 65% for this examination. As in previous examinations, a little over half the questions had a facility of 65% or more (1.1, 1.2, 1.3, 1.5, 1.6, 1.7, 1.10, 1.13, 1.14, 1.17, 1.18, 1.19, 1.20, 1.21, 1.22, 1.23 and 1.28) and on this occasion no question had a facility of 35% or less.

The overall discrimination achieved by the paper was good, with all questions discriminating at least satisfactorily between stronger and weaker candidates. Only one question had a distractor which was more popular than the correct response, and this was option A in 1.16, although the margin in which it did so was very small. In this question it would appear that many candidates could not discriminate between an option categorically stating what would occur and another in which one outcome may influence another.

Questions 1.4 and 1.12 both had a facility of just less than 50% and discriminated well but it would appear that those who were not confident with the numbers may often have just guessed, rather than deliberately choosing a wrong value, for the other responses had very similar facilities.

While nearly two thirds of candidates selected the correct response to 1.15, a clear majority of those not doing so believed both statements to be factually correct, assuming that if there are no known health concerns at this stage then it is reasonable to deduce that this will also be true in future when the children will be older, which is not necessarily the case.

In contrast to this, while 60% selected the correct response in 1.26, there was no single clear alternative as all the other distractors proved to be attractive to a good proportion of the remaining candidates.

As on many occasions in the past the assertion/reason questions at the end were mostly found to have a lower facility than the average, although these questions continue to discriminate well between stronger and weaker candidates.

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 in grouped in pairs (02 and 03, 04 and 05, 06 and 07), and the candidate 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 aspects 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 to candidates. The questions do not require detailed source analysis, but candidates can refer to the source in their response and may well be able to make use of it to inform their answers. Candidates are, however, 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:

Questions 02 and 03	Questions 04 and 05	Questions 06 and 07
47.75%	46.00%	6.25%

In general, examiners felt that questions 02/03 and 04/05 were accessible and that candidates engaged with them in a very positive way. Rather unusually, the mean marks for the first of the pairs of questions (i.e. 02 and 04) were higher than for the second of the pairs (03 and 05), despite there being more marks available for the latter questions. Questions 06/07 did not have widespread appeal, though many of the responses to these questions were well informed and successful. The mean marks for 06 and 07 were somewhat lower than for the other questions, with that for 07 being marginally better.

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

Question 02

There were significant clues in the stimulus passage about the reasons for an increased risk of extinctions of plants and animals. Examiners were looking for candidates to develop and explain those reasons, preferably with appropriate exemplification. Strong answers contained detailed information and some of the best were aware that precise knowledge of the numbers of species is limited and that figures on extinctions are based on estimates. Weaker answers did little more than repeat the content of the source, while others lost focus on the question and spent too much time elaborating on the reasons for global warming.

Question 03

Answers to 03 could be structured in two parts, in line with the wording of the question. Examiners were looking for a discussion of the importance of conservation, and of the value of a range of conservation measures. Good answers included some thoughtful comments on conservation and showed an understanding of different methods. Many answers gave only cursory attention to the importance of conservation and concentrated, with greater or lesser success, on methods. Some of the weaker responses produced a sort of general, all-purpose 'environmental' essay, with much emphasis on recycling, etc, but not focusing on the specific requirements of this question.

Question 04

This was a fairly straightforward question, with the opportunity for clear science in explaining the causes of earthquakes, while recent events in Haiti, New Zealand and Japan offered examples of their effects. Many responses were very well informed, with detailed science and appropriate explanations of effects, including tsunamis. Japan featured heavily in examples, though remarkably few candidates mentioned the Christchurch earthquake of 2011. Weaker answers tended to paraphrase the information in the source, with little or no development.

Question 05

The emphasis of the question was on the way in which levels of social and economic development are related to the harm caused by earthquakes. Strong candidates were able to use their knowledge of earthquakes in Haiti and Japan to illustrate this. Better responses were also able to offer ideas on how the impact of natural disasters such as earthquakes can be ameliorated by political, social and economic measures as well as by physical preparations. Less effective answers struggled with the concept of 'social and economic fragility', and their ideas on overcoming the harm caused by earthquakes were limited to charity and international aid.

Question 06

Examiners were looking for a well informed answer with awareness of the importance of evidence, the nature of scientific method, and reference to the concept of a fair test and peer review. Better responses demonstrated appropriate knowledge and understanding, and were illustrated with appropriate examples. Many of the weaker responses seemed to have only a vague understanding of the issues, while some took the word 'principles' used in the question to refer to ethical and moral issues, such as animal testing, rather than impartiality in research.

Question 07

Candidates were expected to consider how far scientists can be objective, given the political, commercial and other pressures they face. A number of likely areas were suggested in the stimulus passage and there were prompts included in the wording of the question itself. Only a small proportion of answers dealt knowledgeably with the full range of possible issues with relevant examples, and some seemed to think that all scientific research was controlled by government, with predictably negative comments on the trustworthiness of politicians.

Mark Ranges and Award of Grades

Grade boundaries and cumulative percentage grades are available on the Results statistics page of the AQA Website.

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