

Mark Scheme (Results)

Summer 2012

GCE General Studies (6GS01)  
Paper 01

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Summer 2012

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## Section A

| Question Number | Answer | Mark |
|-----------------|--------|------|
| Q1              | B      | 1    |

| Question Number | Answer | Mark |
|-----------------|--------|------|
| Q2              | C      | 1    |

| Question Number | Answer | Mark |
|-----------------|--------|------|
| Q3              | A      | 1    |

| Question Number | Answer | Mark |
|-----------------|--------|------|
| Q4              | C      | 1    |

| Question Number | Answer | Mark |
|-----------------|--------|------|
| Q5              | D      | 1    |

| Question Number | Correct Answer | Mark |
|-----------------|----------------|------|
| Q6              | B              | 1    |

| Question Number | Answer | Mark |
|-----------------|--------|------|
| Q7              | D      | 1    |

| Question Number | Answer | Mark |
|-----------------|--------|------|
| Q8              | B      | 1    |

| Question Number | Answer | Mark |
|-----------------|--------|------|
| Q9              | C      | 1    |

| Question Number | Answer | Mark |
|-----------------|--------|------|
| Q10             | C      | 1    |

| Question Number | Answer | Mark |
|-----------------|--------|------|
| Q11             | D      | 1    |

| Question Number | Answer | Mark |
|-----------------|--------|------|
| Q12             | C      | 1    |

| Question Number | Answer | Mark |
|-----------------|--------|------|
| Q13             | D      | 1    |

| Question Number | Answer | Mark |
|-----------------|--------|------|
| Q14             | D      | 1    |

| Question Number | Answer | Mark |
|-----------------|--------|------|
| Q15             | A      | 1    |

| Question Number | Answer | Mark |
|-----------------|--------|------|
| Q16             | D      | 1    |

| Question Number | Answer | Mark |
|-----------------|--------|------|
| Q17             | C      | 1    |

| Question Number | Answer | Mark |
|-----------------|--------|------|
| Q18             | A      | 1    |

| Question Number | Answer | Mark |
|-----------------|--------|------|
| Q19             | D      | 1    |

| Question Number | Answer | Mark |
|-----------------|--------|------|
| Q20             | B      | 1    |

## Section B

| Question Number | Acceptable Answers  | Reject | Mark |
|-----------------|---|--------|------|
| 21              | Selects/uses 4%, 1 million and 2;<br>answer = 1.08 million tonnes;:<br>answer = 1.0816 million tonnes;;;<br><br>(award 2 marks for incorrect answer 1.08 and 3 marks for 1.0816 - no unit errors) |        | 3    |

| Question Number | Acceptable Answers   | Reject | Mark |
|-----------------|--|--------|------|
| 22              | Accept any three from<br><br>Rapid rate of development of technology;<br>Reducing cost of equipment;<br>Built-in obsolescence;<br>Changing fashions;<br>Effluent society/disposal rather than mend;<br>Wider applications of technology; |        | 3    |

| Question Number | Acceptable Answers   | Reject | Mark |
|-----------------|--|--------|------|
| 23              | Comparison is between toxic sludge from former gas plant and WEEE;<br>Conclusion is that "we will be leaving similar problems to be overcome in the future"; |        | 2    |

| Question Number | Acceptable Answers             | Reject | Mark |
|-----------------|--------------------------------|--------|------|
| 24              | CFCs;<br>Heavy metals/mercury; |        | 2    |

| Question Number | Acceptable Answers  | Reject | Mark |
|-----------------|---|--------|------|
| 25              | Size/some items too large for normal waste;<br>Legislation;<br>Recycling economic for large items;<br>Removal of CFCs from refrigerators; |        | 3    |

| Question Number | Acceptable Answers   | Reject | Mark |
|-----------------|--|--------|------|
| 26              | Any two from<br>Cooker;<br>Freezer;<br>Washing machine;<br>Tumble dryer; |        | 2    |

| Question Number   |   |      |
|---|---|------|
| 27  |   |      |
| Marking Guidance:   |   |      |
| After marking the answer for AO3, assess it for communication, AO4. |   |      |
|   | <i>A03:<br/>Demonstrate understanding of different types of knowledge, appreciating their strengths and limitations.</i>  | Mark |
|   | <p>The following marking points are awarded <b>independently</b>. Only 1 mark can be awarded under each letter.</p> <p><b>A</b> Award 1 mark for identifying/quoting at least 2 relevant pieces of evidence from passage;</p> <p><b>B</b> Award 1 mark for making a general comment about the strength or weakness of evidence in the passage; (eg evidence is strong/weak or includes fact/opinion ) <b>OR</b> for discussing lack of balance or possible bias.</p> <p><b>C</b> Award 1 mark for correctly identifying a relevant statement as a <b>fact</b> (accept statistic), eg<br/> “3.3 tonnes of electronic waste”<br/> “by 2007 the UK was already producing an estimated 1M tonnes”;<br/> “minimum of 4 tonnes of WEEE”</p> <p><b>D</b> Award 1 mark for correctly identifying a relevant statement as an opinion, eg<br/> “site cleared at enormous cost”;<br/> “minimal legislation”;<br/> “at best, a small step in the right direction”;</p> <p><b>E</b> Award 1 mark for any of the following statements or WTTE<br/> Factual evidence is stronger than opinion;<br/> Factual evidence can be checked/confirmed;<br/> Opinion cannot be confirmed;</p> | 4    |

|  | Mark | Descriptor  |
|--|------|---|
|  |      | <p><i><b>AO4:</b></i><br/> <i>Communicate clearly and accurately in a concise, logical and relevant way.</i></p> <p><i>The AO4 marks are NOT dependent upon the AO3 marks.</i></p>                                    |
|  | 0    | The answer is badly expressed, not relevant or fails to treat the question seriously, there are many serious lapses in grammar and spelling or there is too little of the candidate's own writing to assess reliably. |
|  | 1    | The answer is only understandable in parts, writing may be in an inappropriate form, arguments are not clearly expressed, rarely relevant and in places grammar and spelling inhibit communication.                   |
|  | 2    | The answer is broadly understandable, writing is in the correct form. Arguments are on the whole coherent, mainly relevant and grammar and spelling do not inhibit communication.                                     |
|  | 3    | The answer is clear and lucid, (writing in correct form is taken as a matter of course) arguments are coherent and well laid out, and relevant, there are very few grammatical or spelling errors.                    |

|   |  |  |
|---|--|--|
| Question Number   |  |  |
| 28  |  |  |
| Marking Guidance  |  |  |
| After marking the answer for AO2, assess it for communication, AO4. |  |  |
|   | <i>A02:<br/>Marshall evidence and draw conclusions: select, interpret, evaluate and integrate information, data, concepts and opinions.</i>  | Mark   |
|   | <p>Award up to to 3 marks for identifying means of disposal and up to 3 marks for assessing advantages/disadvantages of different means of disposal, with an overall maximum of 5 marks.</p> <p>IDENTIFYING ( 3 marks max )</p> <p>Award one mark each for <b>recycling, dumping/landfill</b> and <b>incineration</b>.</p> <p>ASSESSING ( 3 marks max )</p> <p>Do not award any marks for assessing if answer simply reproduces text from passage. To gain marks candidates must include some information or comment which is not simply reproduced directly from the text.</p> <p>If an answer includes most of the advantages/disadvantages for all 3 methods of disposal from the text but these have been paraphrased award 1 mark.</p> <p>If an answer includes a simple relevant additional comment about <b>recycling</b> award 1 mark.</p> <p>eg viable for larger items but viability for smaller items depends on what can be recovered, economics of recovery depend on cost of raw materials or how we legislate/charge for landfill;</p> <p>If an answer includes a simple relevant additional comment about <b>dumping /landfill</b> award 1 mark.</p> <p>eg land is limited and landfill is now increasingly controlled by legislation/incurs charges, may be suitable for some items which are not easily recyclable and which do not contain toxins;</p> <p>If an answer includes a simple relevant additional comment about <b>incineration</b> award 1 mark.</p> <p>eg suitable for small items containing precious metals but many items now include plastics which can produce toxins when burnt, disposal in LEDCs is not acceptable and is in any case only a short-term solution/not a long-term solution;</p> | 5  |
|   | Mark   | Descriptor   |
|   |  | <i>A04:<br/>Communicate clearly and accurately in a concise, logical and</i> |



|  |   |   |
|--|---|---|
|  |   | <p><i>relevant way.</i></p> <p><i>The AO4 marks are NOT dependent upon the AO2 marks.</i></p>   |
|  | 0 | The answer is badly expressed, not relevant or fails to treat the question seriously, there are many serious lapses in grammar and spelling or there is too little of the candidate's own writing to assess reliably. |
|  | 1 | The answer is only understandable in parts, writing may be in an inappropriate form, arguments are not clearly expressed, rarely relevant and in places grammar and spelling inhibit communication.                   |
|  | 2 | The answer is broadly understandable, writing is in the correct form. Arguments are on the whole coherent, mainly relevant and grammar and spelling do not inhibit communication.                                     |
|  | 3 | The answer is clear and lucid, (writing in correct form is taken as a matter of course) arguments are coherent and well laid out, and relevant, there are very few grammatical or spelling errors.                    |

## Section C

| Question Number | Background  |
|-----------------|---|
| 29              | <p>Improvements in standards of health care in the UK and elsewhere in Europe have been spectacular over the last hundred years or so. Individual specific examples such as the use of X-rays from the 1890s, or penicillin/antibiotics from the 1930s have transformed some life-threatening diseases or conditions to minor irritations requiring nothing more than a quick trip to the chemist or GP. Most people in the UK now lead much healthier and longer lives, largely due to better health care. Many of the innovations were costly or problematic when first introduced. For example, many early radiologists died as a result of their exposure to X-rays when the problems associated with the technology were not well understood. Modern MRI scanners can cost millions of pounds. The cost of the human genome project is variously estimated but is certainly hundreds of millions, yet Richard Dawkins predicts that the cost of sequencing a complete individual human genome will be £100 by 2050 because of the effects of advances in technology. Despite all the advances, people demand still further improvements. Our ability to treat cancer or prevent dementia is still very limited. How resources are allocated to health care is problematic and even more difficult in some ways are the decisions about the allocation of resources within healthcare, illustrated by the many contentious decisions made by NICE. The source of funding for research into new drugs or treatments is also relevant. X-rays and penicillin were serendipitous discoveries but most modern research is very focused and often funded by giant pharmaceutical companies or charities rather than the state.</p> |

| Marking Guidance  |      |  |
|---|------|--|
| After marking the answer for AO1 and AO2, assess it for communication, AO4. |      |  |
|   | Mark | Descriptor   |
|   |      | <p><b>AO1:</b><br/> <i>Demonstrate relevant knowledge and understanding applied to a range of issues, using skills from different disciplines.</i></p>   |
|   | 0-8  | <p>Award 1 mark for each valid point, up to a maximum of 8 marks, such as:</p> <p>Examples of specific advances in medicine (allow up to 3 marks for different examples);<br/> Development costs for new drugs/treatments can be high;<br/> Costs have fallen as technology has improved;<br/> Eg cost of drugs such as aspirin, paracetamol, antibiotics is very small compared to cost in the past;<br/> Many previously revolutionary drugs/treatments are now commonplace;<br/> People are prepared to pay for good health care eg private provision;<br/> Medicine is application of science/technology;<br/> We do not know what advances there will be in science;<br/> Only some funding for research comes from government and can be controlled;<br/> Funding also comes from charities;<br/> Funding also comes from private companies;</p> <p>The above points are illustrative only and not exhaustive. Any other valid points must be credited, even if they don't appear in the list above.</p> |

| Level | Mark | Descriptor   |
|-------|------|--|
|       | 0-8  | <p><i>A02:<br/>Marshall evidence and draw conclusions: select, interpret, evaluate and integrate information, data, concepts and opinions.</i></p> <p>Award 1 mark for each valid point, up to a maximum of 8 marks.</p> <p>The question requires candidates to critically examine conflicting views/alternative viewpoints. Candidates who give consideration solely to one side of the question are limited to a maximum of 6 marks.</p> <p>Points should be used to demonstrate how evidence is marshalled by:</p> <ul style="list-style-type: none"> <li>• Selecting: identifying and applying relevant evidence</li> <li>• Interpreting: showing how evidence helps to answer the question</li> <li>• Evaluating: assessing the strength of the evidence in support of the question</li> <li>• Integrating: using evidence to develop a coherent argument/conclusion</li> </ul> <p>Note - evidence can be information, data, concepts or opinions</p> <p>The following areas are likely to be addressed by a majority of candidates, but candidate responses are not restricted to these areas. Other valid points must be credited, even if they don't appear in the list below.</p> <p>Because of the importance of health care it is unlikely people would accept suspension of research;</p> <p>Other sources of funding for research this could not be controlled;</p> <p>Would lead to even greater inequalities than those that already exist;</p> <p>History of medicine shows that unit costs come down but costs overall go up because we are treating far more people for a far wider range of ailments;</p> <p>Many individual advances have greatly reduced costs eg penicillin;</p> <p>We will always need a way of allocating resources eg utilitarianism or some other way of cost/benefit analysis;</p> <p>Arguments over decisions by NICE illustrate difficulties;</p> <p>Charitable donations show public concern/interest/support;</p> <p>Most problems caused by increasing life expectancy;</p> <p>Which must be linked to improved quality of life;</p> <p>Draws conclusion - allow up to 3 marks;</p> <p>Any other valid points must be credited.</p> |

|  | Mark | Descriptor   |
|--|------|--|
|  |      | <p><i>AO4:</i><br/> <i>Communicate clearly and accurately in a concise, logical and relevant way.</i></p> <p><i>The AO4 marks are not dependent upon the AO1 and AO2 marks.</i></p>                      |
|  | 0    | The answer is badly expressed or fails to treat the question seriously, there are many serious lapses in grammar and spelling or there is too little of the candidate's own writing to assess reliably.  |
|  | 1    | The answer is only understandable in parts and maybe irrelevant, writing may be in an inappropriate form, arguments are not clearly expressed, and in places grammar and spelling inhibit communication. |
|  | 2    | The answer is generally understandable, writing is often in the correct form. Arguments are sometimes coherent and relevant, and grammar and spelling do not seriously inhibit communication.            |
|  | 3    | The answer is broadly understandable, writing is in the correct form. Arguments are on the whole coherent and relevant, and grammar and spelling do not inhibit communication.                           |
|  | 4    | The answer is clear and lucid, (writing in correct form is taken as a matter of course) arguments are coherent, well laid out and relevant, there are very few grammatical or spelling errors.           |

| Question Number | Background   |
|-----------------|--|
| 30              | <p>Like all scientific theories, the theory of evolution is based on evidence, in particular the fossil record. Creationists often point to gaps in the fossil record to support their view. It has been said that when a fossil is found which "fills" the gap, creationists point to two new gaps. The "argument from design" associated with William Paley, based on nothing more than a very poor argument by analogy (intelligent design) is now sometimes represented as "creationist science". Creationists like to refer to evolution as a "theory" and therefore no better than any other "theory" such as creationism. This is based on nothing more than a deliberate confusion of the way "theory" is used in science to describe a hypothesis which has been tested and not yet falsified, compared to the use of "theory" in everyday language as a hunch or intuition, ie equivocation. Creationists also highlight scientific theories from the past which have been "proved wrong" to illustrate that science cannot be certain of anything. Science works precisely because it is continually refining the way in which scientific models or theories reflect or explain the world around us. Uncertainty or doubt is a fundamental part of taking a scientific approach to things. Creationists base their certainty on faith/sacred texts. Most major religions now accept the theory of evolution, and creationists represent small minorities within their own religions who still cling to literal interpretations of their own particular sacred texts. It has been estimated that there are over 500 different creation stories, each of them different, in various faith groups.</p> |

| Marking Guidance  |      |  |
|---|------|--|
| After marking the answer for AO1 and AO2, assess it for communication, AO4. |      |  |
|   | Mark | Descriptor   |
|   |      | <p><i>AO1:</i><br/> <i>Demonstrate relevant knowledge and understanding applied to a range of issues, using skills from different disciplines.</i></p>   |
|   | 0-8  | <p>Award 1 mark for each valid point, up to a maximum of 8 marks, such as:</p> <p>Evolution (max 5 marks)</p> <p>Science is based on induction;<br/> Induction is based on enumeration/generalisation from specific;<br/> We can only make a limited number of observations;<br/> Theory is a successfully tested hypothesis;<br/> Theories have been falsified;<br/> Evidence for evolution in fossil record;<br/> Fossil record is not complete;<br/> Modern discoveries about DNA;</p> <p>Creationism (max 5 marks)</p> <p>Based on faith;<br/> Sacred texts describe creation by a god;<br/> Different religions have different creation stories;<br/> Intelligent design argument;<br/> Based on Paley's watch analogy;</p> <p>The above points are illustrative only and not exhaustive. Any other valid points must be credited, even if they don't appear in the list above.</p> |

| Level | Mark | Descriptor   |
|-------|------|--|
|       | 0-8  | <p><i>A02:<br/>Marshall evidence and draw conclusions: select, interpret, evaluate and integrate information, data, concepts and opinions.</i></p> <p>Award 1 mark for each valid point, up to a maximum of 8 marks.</p> <p>The question requires candidates to critically examine conflicting views/alternative viewpoints. Candidates who give consideration solely to one side of the question are limited to a maximum of 6 marks.</p> <p>Points should be used to demonstrate how evidence is marshalled by:</p> <ul style="list-style-type: none"> <li>• Selecting: identifying and applying relevant evidence</li> <li>• Interpreting: showing how evidence helps to answer the question</li> <li>• Evaluating: assessing the strength of the evidence in support of the question</li> <li>• Integrating: using evidence to develop a coherent argument/conclusion</li> </ul> <p>Note - evidence can be information, data, concepts or opinions</p> <p>The following areas are likely to be addressed by a majority of candidates, but candidate responses are not restricted to these areas. Other valid points must be credited, even if they don't appear in the list below.</p> <p>The nature of induction means science can never be certain;<br/>Although some theories are better supported/more certain;<br/>Extensive evidence for evolution means it is very unlikely to be disproved but has been/will be modified;<br/>The questioning nature of science is a strength not a weakness;<br/>Being certain does not mean being right;<br/>Knowledge based on faith cannot be tested;<br/>So comparison between evolution and creationism is pointless;<br/>Conclusion (up to 3 marks);</p> <p>Any other valid points must be credited.</p> |



|  | Mark | Descriptor<br><br><i>AO4:<br/>Communicate clearly and accurately in a concise, logical and relevant way.</i><br><br><i>The AO4 marks are not dependent upon the AO1 and AO2 marks.</i>                   |
|--|------|--|
|  | 0    | The answer is badly expressed or fails to treat the question seriously, there are many serious lapses in grammar and spelling or there is too little of the candidate's own writing to assess reliably.  |
|  | 1    | The answer is only understandable in parts and maybe irrelevant, writing may be in an inappropriate form, arguments are not clearly expressed, and in places grammar and spelling inhibit communication. |
|  | 2    | The answer is generally understandable, writing is often in the correct form. Arguments are sometimes coherent and relevant, and grammar and spelling do not seriously inhibit communication.            |
|  | 3    | The answer is broadly understandable, writing is in the correct form. Arguments are on the whole coherent and relevant, and grammar and spelling do not inhibit communication.                           |
|  | 4    | The answer is clear and lucid, (writing in correct form is taken as a matter of course) arguments are coherent, well laid out and relevant, there are very few grammatical or spelling errors.           |

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