

# Mark Scheme (Results)

January 2013

GCE General Studies (6GS01/01)  
Unit 1: Challenges for Society

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## General Marking Guidance

- All candidates must receive the same treatment. Examiners must mark the first candidate in exactly the same way as they mark the last.
- Mark schemes should be applied positively. Candidates must be rewarded for what they have shown they can do rather than penalised for omissions.
- Examiners should mark according to the mark scheme not according to their perception of where the grade boundaries may lie.
- There is no ceiling on achievement. All marks on the mark scheme should be used appropriately.
- All the marks on the mark scheme are designed to be awarded. Examiners should always award full marks if deserved, i.e. if the answer matches the mark scheme. Examiners should also be prepared to award zero marks if the candidate's response is not worthy of credit according to the mark scheme.
- Where some judgement is required, mark schemes will provide the principles by which marks will be awarded and exemplification may be limited.
- When examiners are in doubt regarding the application of the mark scheme to a candidate's response, the team leader must be consulted.
- Crossed out work should be marked UNLESS the candidate has replaced it with an alternative response.

## Section A

Question Number	Answer	Mark
Q1	D	<b>1</b>

Question Number	Answer	Mark
Q2	C	<b>1</b>

Question Number	Answer	Mark
Q3	A	<b>1</b>

Question Number	Answer	Mark
Q4	D	<b>1</b>

Question Number	Answer	Mark
Q5	D	<b>1</b>

Question Number	Correct Answer	Mark
Q6	B	<b>1</b>

Question Number	Answer	Mark
Q7	A	<b>1</b>

Question Number	Answer	Mark
Q8	B	<b>1</b>

Question Number	Answer	Mark
Q9	C	<b>1</b>

Question Number	Answer	Mark
Q10	C	<b>1</b>

Question Number	Answer	Mark
Q11	D	<b>1</b>

Question Number	Answer	Mark
Q12	C	<b>1</b>

Question Number	Answer	Mark
Q13	B	<b>1</b>

Question Number	Answer	Mark
Q14	A	<b>1</b>

Question Number	Answer	Mark
Q15	B	<b>1</b>

Question Number	Answer	Mark
Q16	C	<b>1</b>

Question Number	Answer	Mark
Q17	A	<b>1</b>

Question Number	Answer	Mark
Q18	B	<b>1</b>

Question Number	Answer	Mark
Q19	A	<b>1</b>

Question Number	Answer	Mark
Q20	D	<b>1</b>

## Section B

Question Number	Acceptable Answers	Mark
<b>21</b>	<p>Up to 2 marks from</p> <p>1 attempts to calculate 0.6% of 600 billion (= £3.6 billion) and uses £2.2 billion and £14 billion;</p> <p>2 Final answer = £19.8 billion / 19 800 000 000 / <math>19.8 \times 10^9</math></p> <p>award 2 marks for correct final answer even with no calculation</p> <p>do not penalise if billion ( or £ ) is missing from final answer because they cannot arrive at 19.8 without using the correct units</p>	<b>2</b>

Question Number	Acceptable Answers	Mark
<b>22</b>	<p>Up to 2 marks from</p> <p>1 government/national budget</p> <p>2 business/industry/private</p> <p>3 (higher) education/universities</p>	<b>2</b>

Q Number	Acceptable Answers	Mark
<b>23</b>	<p>Up to 2 marks from</p> <p>1 charity (accept public donations or lottery)</p> <p>2 normally medical (accept a named disease eg cancer )</p> <p>Award both marks for named charity which includes disease eg Cancer Research Fund, Alzheimer's Research Trust. (Award both marks if name is slightly wrong but it is clear because name is capitalised eg Cancer Research).</p> <p>The second mark is dependent on the first mark ie no mark just for mention of cancer etc</p> <p>Do not accept EU/CERN/foreign governments</p> <p>Do not accept NHS, Army/Services, NASA</p> <p>Send any not covered by above to review</p>	<b>2</b>

Question Number	Acceptable Answers	Mark
<b>24</b>	<p>Up to 2 marks from</p> <p>1 pharmaceutical/drug industry 2 many lives saved/fewer deaths/cured infection/survived infection</p> <p>Accept quotes which include the relevant phrases</p>	<b>2</b>

Question Number	Acceptable Answers	Mark
<b>25</b>	<p>Up to 2 marks from</p> <p>1 named scientific research 2 associated application (2<sup>nd</sup> mark is dependent on 1<sup>st</sup> mark being awarded) eg stem cell research and stem cell therapy (2 marks) semiconductors and transistors (2 marks) genetic engineering/modification and GM foods/animals (2 marks) DNA research and cloning (2 marks)</p> <p>Allow specific medical discoveries eg</p> <p>x-rays and use for producing images of bones/other structures (2 marks) antiseptics and reduced infection (2 marks)</p> <p>The research area has to be fairly specific so do not allow cancer research, evolution, electricity, astronomy/space, cosmetics, animal testing, material properties, global warming</p> <p>Do not award any marks if first answer refers to technological application eg nuclear or atomic weapons or power, fuels or energy storage devices</p>	<b>2</b>

Question Number	Acceptable Answers	Mark
<b>26</b>	<p>1 mark from</p> <p>1 CD/DVD;  2 surveying/sighting instruments ;  3 laser display;  4 medical eg in (eye) surgery/sight correction  5 cutting cloth/metals;  6 supermarket scanners;  7 (laser) printer/copier  8 pointer  9 in fibre optics</p> <p>Do not accept speed camera</p>	<b>1</b>

Question Number	Acceptable Answers	Mark
<b>27</b>	<p>Up to 2 marks from</p> <p>1 data may be difficult to collect/lots of companies involved;  2 R&amp;D spending may not be well defined/what is included;  3 commercial confidentiality/secretcy/disclosure not compulsory;</p> <p>Do not credit just "figures are estimated" – this is in question stem</p>	<b>2</b>

Question Number	Acceptable Answers	Mark
<b>28</b>	<p>Up to 2 marks from</p> <p>1 shared costs/reduced cost/affordable/increases funding;  2 research findings shared;  3 more scientists involved/wider knowledge base/faster results;</p>	<b>2</b>



<b>29</b>		
Marking Guidance		
After marking the answer for A02, assess it for communication, AO4.		
	<b>A02:</b> <b><i>Marshall evidence and draw conclusions: select, interpret, evaluate and integrate information, data, concepts and opinions.</i></b>	Mark
	<p>All marks are awarded separately and can only be awarded once.</p> <p>Up to 4 marks from:</p> <p><b>A:</b> Curiosity/basic research is longer-term (no immediate application)</p> <p><b>B:</b> Curiosity/basic research is not linked to products or commercial</p> <p><b>C:</b> Curiosity/basic research can lead to applied research or applied research is based on curiosity-driven/earlier research</p> <p><b>D:</b> Curiosity/basic research can have outcomes which are unexpected/cannot be predicted</p> <p><b>E:</b> Applied research shorter-term</p> <p><b>F:</b> Applied research is linked to products or applications/commercial</p> <p><b>G:</b> Applied research outcomes are more predictable</p>	<b>4</b>

Mark	Descriptor
	<p><b>AO4:</b>  <i>Communicate clearly and accurately in a concise, logical and 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.

<b>30</b>		
Marking Guidance		
After marking the answer for A03, assess it for communication, AO4.		
	<b>A03:</b> <i>Demonstrate understanding of different types of knowledge, appreciating their strengths and limitations.</i>	Mark
	<p>All marks are awarded separately and can only be awarded once.</p> <p>Up to 5 marks from:</p> <p><b>A:</b> A Reference to possible bias OR author is unknown OR examples are selected/limited in range</p> <p><b>B:</b> Identifies a relevant fact( accept statistic/objective) eg "Fleming working at St Mary's 1928" "budget of £600 billion" "Einstein in 1917" "Nobel prize-winning scientist Lord Porter"</p> <p><b>C:</b> Identifies a relevant opinion (accept subjective) eg "the world is increasingly dependent" accept quotes from Porter or Sagan as opinion "it can be argued" "one important application" "limited by high costs" "world increasingly dependent"</p> <p><b>D:</b> Correct comments on strength of fact or opinion eg fact can be substantiated, facts provide stronger evidence than opinion, facts can be used to back up opinions</p> <p><b>E:</b> Correctly identifies argument from authority (not expert)</p> <p><b>F:</b> Correctly identifies argument by analogy "seed corn..."</p> <p><b>G:</b> Further explanation about argument from authority eg status of authority figure OR about argument by analogy eg involves comparison/similarities OR comments on weakness of arguments from authority/analogy</p> <p><b>H:</b> Use of <u>examples</u> is effectively an inductive argument</p>	<b>5</b>

Mark	Descriptor
	<p><b>AO4:</b>  <i>Communicate clearly and accurately in a concise, logical and 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		
<b>31</b>		
Marking Guidance		
After marking the answer for AO1 and AO2, assess it for communication, AO4.		
	Mark	Descriptor
		<p><b>AO1:</b>  <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><b>Points relating to use of transport</b></p> <p>A11 alternative fuels/power sources are being developed / example  A12 aircraft are more efficient/carry more passenger  A13 cars are more efficient/electric cars  A14 no. of cars/aircraft/journeys has increased  A15 other forms of transport include rail, bus, tram, tube  A16 which are more efficient  A17 walking or cycling is an alternative / has health benefits  A18 how do we decide what is essential  A19 restrictions will affect people differently  A20 arguments relating to jobs/economy/business/tourism</p> <p><b>Points relating to Carbon emissions/environment</b></p> <p>A21 (carbon emissions) link to global warming/greenhouse effect  A22 which leads to climate change  A23 resulting in loss of habitat/extinction of species/other problems  A24 local environmental impact of more building</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
		<b>A02:</b> <i>Marshall evidence and draw conclusions: select, interpret, evaluate and integrate information, data, concepts and opinions.</i>

	0-8	<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>B11 reducing congestion reduces carbon emissions  B12 people want cars etc because of convenience/alternatives not viable  B13 much public transport is inconvenient/expensive/ people are unwilling to use it  B14 there are other ways of reducing use (while maintaining some choice)  B15 eg congestion charging, toll roads, pedestrian precincts, taxation more linked to mileage, working from home, increased use of ICT/Digital Technology, car sharing (up to 2 examples)</p> <p><b>Drawing conclusions</b></p> <p>B31 Conclusion which is simple (implicit or explicit)  1 mark</p> <p>B32 Conclusion linked to limited evidence/arguments  2 marks</p> <p>B33 Conclusion balanced and comprehensive  3 marks</p> <p>Any other valid points must be credited.</p>
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	Mark	Descriptor  <b>AO4:</b> <i>Communicate clearly and accurately in a concise, logical and relevant way.</i>  <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.



Question Number		
<b>32</b>		
Marking Guidance		
After marking the answer for AO1 and AO2, assess it for communication, AO4.		
	Mark	Descriptor
		<p><b>AO1:</b>  <b><i>Demonstrate relevant knowledge and understanding applied to a range of issues, using skills from different disciplines.</i></b></p>
	0-8	<p>Award 1 mark for each valid point, up to a maximum of 8 marks, such as:</p> <p>Nature of Human Rights</p> <p>A11 Identifies other human rights not mentioned in source (up to 3 separate marks)  A12 Some human rights are freedoms  A13 Identifies a freedom ( eg from slavery, from persecution)  A14 Some human rights are entitlements  A15 Identifies an entitlement (eg health care, education, food and water)  A16 Explains unconditional ie apply in all circumstances  A17 Explains universal ie apply to everyone regardless / equal opportunities</p> <p>Human Rights Legislation</p> <p>A21 Mentions European Court of Human Rights  A22 human rights incorporated into law / who enforces it?  A23 Not all countries have adopted UNDHR or have legislation</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
		<p><b>AO2:</b>  <b><i>Marshall evidence and draw conclusions: select, interpret, evaluate and integrate information, data, concepts and opinions.</i></b></p>
	0-8	Award 1 mark for each valid point, up to a maximum

		<p>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>Arguments Relating to Constraint of Human Rights</p> <p>B11 Freedoms or entitlements may be constrained;  B12 because they impose on/restrict others  B13 Safety eg shouting fire in a theatre, freedom of assembly  B14 cultural issues eg position of women/other groups in society  B15 Religious entitlements/freedoms  B16 Economic issues eg who pays/LEDCs  B17 Problems of large scale migration/movements across borders  B18 freedom of expression and libel/slander/privacy  B19 treatment of criminals / terrorist suspects</p> <p><b>Drawing conclusions</b></p> <p>B26 Conclusion which is simple (implicit or explicit)  1 mark</p> <p>B27 Conclusion linked to limited evidence/arguments  2 marks</p> <p>B28 Conclusion balanced and comprehensive  3 marks</p> <p>Any other valid points must be credited.</p>
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Mark	Descriptor
	<p><b>AO4:</b>  <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.





