

## **General Studies**

Advanced GCE A2 H479

Advanced Subsidiary GCE AS H079

# **Mark Schemes for the Units**

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**June 2009**

**HX79/MS/R/09**

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All Examiners are instructed that alternative correct answers and unexpected approaches in candidates' scripts must be given marks that fairly reflect the relevant knowledge and skills demonstrated.

Mark schemes should be read in conjunction with the published question papers and the Report on the Examination.

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# F731 The Cultural and Social Domains

## Guidance for Examiners

**Do not use ticks in sections B and D. It is essential that your annotations show clearly why marks have been awarded or withheld.**

Yes	recognises a point worthy of credit
Dev	a developed point or development of a point
No	a content error
NAQ	not answering the question
eg	appropriate example
Sp/G/Eng	spelling, grammar and language error; you are not expected to correct all of them
(....)	indicates a choice or a key phrase <b>OR</b>
<b>Key</b>	written beside an underlined choice or key phrase
Rubric	rubric infringement
<b>D</b>	description
<b>R</b>	reason
<b>Rep</b>	repetition, often of the question
<b>Ev</b>	evaluation

## Stages to an essay mark

Read and annotate **fully** the candidate's response, using any question specific annotations agreed at Standardisation

Review your annotation and then consider in which level the answer is located.

Consider its position within the level and a possible mark.

Fine tune the mark by considering the Assessment Objectives.

**Write a full summative comment using the AO statements from the Generic Mark Descriptors as a comment bank.**

eg	AO1	good knowledge very limited knowledge and eg
	AO2	examples given
	AO3	personal experience relevant restricted personal experience
	AO4	clearly written inaccurate Spg

You may make comments additional to the AO statements but **NOT** instead of them. Such comments must be positive and specific, eg *excellent use of specialist knowledge AO1, notable for clarity and elegance AO4, some unusual eg's well developed, well integrated AO2, the inclusion of personal experience and different perspectives AO3.*

Enter the final mark in a circle.

**If bullet points are used where continuous prose is asked for, a maximum of 20 marks is available for a 30-mark question.**

## Generic Mark Scheme for essay questions worth 30 marks

AO1	<p style="text-align: center;"><b>Level Descriptor</b> The candidate demonstrates the following abilities where appropriate to:</p>	<b>Marks</b>
<b>Level 5</b>	<ul style="list-style-type: none"> <li>• select, use and integrate a very good range of relevant knowledge</li> <li>• show a good understanding of the concepts involved</li> </ul>	<b>8</b>
<b>Level 4</b>	<ul style="list-style-type: none"> <li>• select, use and integrate a good range of relevant knowledge</li> <li>• show an understanding of the concepts involved</li> </ul>	<b>6-7</b>
<b>Level 3</b>	<ul style="list-style-type: none"> <li>• select, use and integrate a range of relevant knowledge</li> <li>• show an adequate understanding of the concepts involved</li> </ul>	<b>4-5</b>
<b>Level 2</b>	<ul style="list-style-type: none"> <li>• select, use and integrate a limited range of relevant knowledge</li> <li>• show a modest understanding of the concepts involved</li> </ul>	<b>2-3</b>
<b>Level 1</b>	<ul style="list-style-type: none"> <li>• select, use and integrate some knowledge which may not be accurate</li> <li>• show a restricted understanding of the concepts involved.</li> </ul>	<b>1</b>
AO2	<p style="text-align: center;"><b>Level Descriptor</b> The candidate demonstrates the following abilities where appropriate to:</p>	
<b>Level 5</b>	<ul style="list-style-type: none"> <li>• interpret and analyse issues and problems well and evaluates them appropriately</li> <li>• use evidence to develop complex reasoned arguments and draw sound conclusions on the evidence</li> </ul>	<b>9-10</b>
<b>Level 4</b>	<ul style="list-style-type: none"> <li>• interpret and analyse issues and problems well and evaluates them competently</li> <li>• use evidence to develop reasoned arguments and draw sound conclusions on the evidence</li> </ul>	<b>7-8</b>
<b>Level 3</b>	<ul style="list-style-type: none"> <li>• undertake some interpretation and analysis of issues and problems and make a superficial evaluation</li> <li>• use evidence to develop arguments and draw conclusions</li> </ul>	<b>5-6</b>
<b>Level 2</b>	<ul style="list-style-type: none"> <li>• demonstrate limited interpretation and analysis of issues and problems with limited evaluation</li> <li>• use evidence to develop limited arguments and draw limited conclusions</li> </ul>	<b>3-4</b>
<b>Level 1</b>	<ul style="list-style-type: none"> <li>• demonstrate poor interpretation and analysis of issues, problems and evaluation</li> <li>• recognise arguments and conclusion.</li> </ul>	<b>1-2</b>

<b>AO3</b>	<b>Level Descriptor</b> The candidate demonstrates the following abilities where appropriate to:	<b>Marks</b>
<b>Level 4</b>	<ul style="list-style-type: none"> <li>• demonstrate good awareness of the differences between types of knowledge</li> <li>• have a good appreciation of the strengths and limitations of the different types of knowledge</li> </ul>	<b>4</b>
<b>Level 3</b>	<ul style="list-style-type: none"> <li>• demonstrate awareness of the differences between types of knowledge</li> <li>• have an appreciation of the strengths and limitations of the different types of knowledge</li> </ul>	<b>3</b>
<b>Level 2</b>	<ul style="list-style-type: none"> <li>• demonstrate awareness of the differences between types of knowledge</li> <li>• have an appreciation of the strengths and limitations of the different types of knowledge</li> </ul>	<b>2</b>
<b>Level 1</b>	<ul style="list-style-type: none"> <li>• demonstrate a restricted awareness of the differences between types of knowledge</li> <li>• have little appreciation of the strengths and limitations of the different types of knowledge.</li> </ul>	<b>1</b>
<b>AO4</b>	<b>Level Descriptor</b> The candidate demonstrates the following abilities where appropriate to:	
<b>Level 5</b>	<ul style="list-style-type: none"> <li>• communicate complex ideas clearly and accurately , using specialist vocabulary where appropriate, in a concise, logical and relevant way</li> <li>• use a wide range of the rules of grammar, punctuation and spelling with accuracy and facility</li> </ul>	<b>8</b>
<b>Level 4</b>	<ul style="list-style-type: none"> <li>• communicate ideas clearly and accurately, using specialist vocabulary where appropriate, in a concise, logical and relevant way</li> <li>• Use a range of the rules of grammar, punctuation and spelling with accuracy and facility</li> </ul>	<b>6-7</b>
<b>Level 3</b>	<ul style="list-style-type: none"> <li>• communicate clearly, using some specialist vocabulary with facility</li> <li>• use some of the rules of grammar, punctuation and spelling with facility</li> </ul>	<b>4-5</b>
<b>Level 2</b>	<ul style="list-style-type: none"> <li>• communicate ideas with limited clarity, using some specialist vocabulary</li> <li>• use some rules of grammar, punctuation and spelling</li> </ul>	<b>2-3</b>
<b>Level 1</b>	<ul style="list-style-type: none"> <li>• communicate with little clarity using occasional specialist terms</li> <li>• use poor grammar and punctuation, and inaccurate spelling.</li> </ul>	<b>1</b>

Section A		
Question Number	Answer	Marks
1 (a)	<p><b>Consider the images in <u>Source 1</u>. For each, identify <u>three</u> features of the creative process which has led to the successful work of art.</b></p> <p>Candidates should make reference to techniques and processes in a general way to inform the examiner.</p> <p><i>A-sculpture</i> – sketches, size, type of material tools, life study, size and proportion, choice of tools, what is to be conveyed [3]  <i>B-painting</i> - lighting, type of paint (mixtures/hues) brushes, painting surface, choice of medium, subject matter, brushes, composition [3]  <i>C-photograph</i> – type of film, lens, filter, lighting, composition, printing paper [3]  <i>D-musical score</i> – harmony and voicing of instruments, timbre, placing of notes, structural awareness, sense of audience [3]</p> <p><i>The following features may apply to all art forms:</i></p> <ul style="list-style-type: none"> <li>• <i>skills</i></li> <li>• <i>inspiration</i></li> <li>• <i>imagination</i></li> <li>• <i>attention to detail</i></li> <li>• <i>patience</i></li> <li>• <i>vision</i></li> <li>• <i>sense of perspective</i></li> <li>• <i>individuality.</i></li> </ul> <p><i>Examiners can allow repetition. Three features of the creative process from each image @ 1 mark each.</i></p>	
(b)	<p><b>Briefly explain George Davies’ ‘style secrets’ as listed in <u>Source 2</u>.</b></p> <p>1 Look for a fashionable and striking piece of clothing that has some longevity – this might be due to its shape or colour or the fact that it is a version of an established item such as jeans.</p> <p>2 Always try to look your best and not simply save all of your best clothes for those special occasions (therefore it is not worn);take care of everything</p> <p>3 Advice against wearing many worthy items of fashion which may usurp each other or conflict. Choose one special piece that will be truly outstanding and catch the eye.</p> <p><i>Award up to 2 marks for each ‘secret’ depending on the quality of the description and extent of the ideas. Annotate using ticks (✓).</i></p>	[6]

Section A		
Question Number	Answer	Marks
(c)	<p><b>How might <u>one</u> of the style secrets in <u>Source 2</u> be applied to the work of an artist with whose work you are familiar?</b></p> <p>Candidates should identify an artist and/or work. They may refer to how well the work or artist is accepted and how popular they are. They may also refer to new techniques and methods, how they are adapted and become effective.</p> <p>Choice of person can be one known to the candidate or a famous person or celebrity. It will be necessary to justify points made and not simply describe the person.</p> <p>Award 1 mark for every valid point up to a maximum of six.</p> <p><i>Examiners must be flexible in judging the choices made by candidates. The marks are to be awarded for the work of the chosen person not their personal characteristics.</i></p>	[6]
(d)	<p><b>With reference to specific examples, identify <u>two</u> major external influences that dictate change in the Arts.</b></p> <p>Candidates may choose influences such as:</p> <ul style="list-style-type: none"> <li>• a specific fashion designer</li> <li>• a style of music</li> <li>• a film or television programme that gives birth to or rejuvenates a fashion</li> <li>• an individual</li> <li>• a historic event.</li> </ul> <p><i>This list is only for example purposes. There are many other acceptable influences that can be drawn from the world of politics, science, society, the economy and the arts.</i></p> <p><i>Award one mark for identification and up to two marks for justification or details given to the identification or examples.</i></p> <p><i>Annotate using <b>I1, I2, D</b> for development, eg for examples.</i></p>	[6]
<b>Section A Total</b>		<b>[30]</b>



Section B		
Question Number	Answer	Marks
2	<p><b>To what extent do you agree with the statement ‘knowledge is power’?</b></p> <p><i>The essay is in two parts and candidates will need to tackle both parts fully in order to access the highest marks.</i></p> <ul style="list-style-type: none"> <li>• understanding the idea of ‘knowledge is power’</li> <li>• assessing the extent that the candidate agrees.</li> </ul> <p><b>What is knowledge?</b></p> <ul style="list-style-type: none"> <li>• experience, expertise or skills acquired by a person through experience or education</li> <li>• theoretical or practical understanding of a subject</li> <li>• facts and awareness gained by experience</li> <li>• the confident understanding of a subject with a view to using it for a specific purpose.</li> </ul> <p><b>Knowledge involves:</b></p> <ul style="list-style-type: none"> <li>• perception</li> <li>• learning</li> <li>• communication</li> <li>• association</li> <li>• reasoning.</li> </ul> <p><b>A statement must be justified, true, and believed.</b></p> <p><b>Possible origins of knowledge cited:</b></p> <ul style="list-style-type: none"> <li>• family, friends, school</li> <li>• books, the internet, and all forms of media</li> <li>• hearsay and rumour</li> <li>• religious beliefs</li> <li>• personal experience and discovery.</li> </ul> <p><i>The statement is open to many interpretations and could be developed in the personal, national, or even historical context.</i></p> <p><b>Some examples of knowledge in the context of power</b></p> <ul style="list-style-type: none"> <li>• a prime minister has the knowledge to determine whether a war should be declared</li> <li>• an, as yet, un accused criminal knows that he/she has committed the crime</li> <li>• a judge’s knowledge of the law enables him to convict or release</li> <li>• a teacher knows the answers to tests</li> <li>• the adjudicator knows which sealed box is in the hands of the contestant.</li> <li>• power in the context of the medical profession.</li> </ul> <p><i>This open-ended style question allows excellent opportunity for candidates to collect AO3 marks by using their personal experience to develop a reasoned and cogent response.</i></p>	[30]

Section B		
Question Number 2	Answer	Marks
	<p><b>The exemplification is provided to give a general indication of the standards of achievement likely to have been shown by the candidates awarded the particular levels. The level awarded will depend, in practice, upon the extent to which the candidate has met the assessment objectives overall.</b></p>	
	<p><b>Level 5</b> answers will clearly tackle the issue of knowledge and place it in a clear framework (AO1) by using complex reasoning and a good understanding of views (AO2). There will be evidence of personal opinion and/or experience to support ideas (AO3) as well as clear layout and accurate communication (AO4).</p>	<b>27-30</b>
	<p><b>Level 4</b> answers will tackle the issue of knowledge with some success (AO1) by using relevant ideas and reasoning and some understanding of views (AO2). There will be evidence of personal opinion and/or experience to support ideas (AO3) as well as clear communication (AO4).</p>	<b>21-26</b>
	<p><b>Level 3</b> answers will show some understanding of the concept of knowledge and provide an adequate overview of the quotation (AO1). The analysis and examples will be relevant but superficial in content and structure (AO2/3). Communication will be clear and errors will not blur the understanding of the key points (AO4).</p>	<b>13-20</b>
	<p><b>Level 2</b> answers will concentrate on one simple definition or issue and fail to adequately support the points made (AO1/2). There will be an absence of personal opinion and the ideas will mostly not be linked and unstructured (AO3). Communication will display weaknesses which hamper clear understanding (AO4).</p>	<b>8-12</b>
	<p><b>Level 1</b> answers will lack clear understanding and knowledge (AO1) without any really clear understanding. There will be little or no evidence of personal experience or any evaluation (AO3). Communication will be weak and will be very briefly stated. (AO4).</p>	<b>1-7</b>

Section B		
Question Number	Answer	Marks
3	<p><b>Outline and discuss <u>two</u> ways in which publishers have made magazines and periodicals more appealing to readers. You should refer to named examples of magazines or periodicals in your answer.</b></p> <p><i>If there is a request to show how magazines and periodicals have been made more attractive in recent years then it would seem to be necessary to offer some idea as to what they used to be like.</i></p> <p><b>Magazines and periodicals originally were:</b></p> <ul style="list-style-type: none"> <li>• expensive</li> <li>• contained sometimes unreliable information that was out of date</li> <li>• contained few pictures</li> <li>• were largely black and white printed on low density paper</li> <li>• confined to minority interest groups or exclusively female.</li> </ul> <p><b>Publishers have tried to improve their work by:</b></p> <ul style="list-style-type: none"> <li>• publishing more regularly with less emphasis on actuality and more on post-event debate</li> <li>• being full of pictures</li> <li>• printing in full colour on high quality (density) shiny paper</li> <li>• appealing to male and female readers</li> <li>• focusing on leisure, fashion, music and celebrities</li> <li>• uncovering and exposing scandalous topics and outrageous stories</li> <li>• having less respect for people's sensibilities by publishing shocking images</li> <li>• offer many 'freebies' and give-aways</li> <li>• posting the magazine or periodicals on the internet.</li> </ul> <p><i>It would be impossible to complete a successful essay without clear reference to a magazine or periodical. Examiners may be faced with a narrow range of titles but to answer the essay very well it may require a wider ranging set of references and discussion.</i></p> <p><i>Annotate using W1,W2 for ways..</i></p>	[30]

Section B		
Question Number 3	Answer	Marks
	<p><b>The exemplification is provided to give a general indication of the standards of achievement likely to have been shown by the candidates awarded the particular levels. The level awarded will depend, in practice, upon the extent to which the candidate has met the assessment objectives overall.</b></p>	
	<p><b>Level 5</b> answers will look at the wider issues of how publishers have tackled a changing market (AO1) by using complex reasoning and a good understanding of views, as well as clearly illustrative examples (AO2). There will be evidence of personal opinion and/or experience or preference to support ideas (AO3) as well as clear layout and accurate communication (AO4).</p>	<b>27-30</b>
	<p><b>Level 4</b> answers will look at some of the wide issues of how publishers have tackled a changing market (AO1) by showing an understanding of views as well as some examples (AO2). There will be some evidence of personal opinion and/or experience or preference to support ideas (AO3) as well as clear communication (AO4)</p>	<b>21-26</b>
	<p><b>Level 3</b> answers will show some understanding of the ways publishers have tackled issues with perhaps one example (AO1). The analysis will be relevant but superficial in content and structure (AO2/3). Communication will be clear and errors will not blur the understanding of the key points (AO4).</p>	<b>13-20</b>
	<p><b>Level 2</b> answers will concentrate on one reference to change and fail to adequately support the points made (AO1/2). There will be an absence of personal opinion and the ideas will mostly not be linked and unstructured (AO3). Communication will display weaknesses which hamper clear understanding (AO4).</p>	<b>8-12</b>
	<p><b>Level 1</b> answers will lack clear understanding and knowledge (AO1) without any really clear understanding. There will be little or no evidence of personal experience or any evaluation (AO3). Communication will be weak and will be very briefly stated. (AO4).</p>	<b>1-7</b>

Section B		
Question Number	Answer	Marks
4	<p><b>By referring to <u>one</u> art form in detail, explain and discuss the difficulties facing an artist who wishes to create an original work.</b></p> <p><i>This essay involves the candidate referring to one art form, explain difficulties, and problems of originality.</i></p> <p><b>Difficulties</b></p> <ul style="list-style-type: none"> <li>• time scale</li> <li>• materials</li> <li>• demand</li> <li>• fusion of ideas</li> <li>• shape and direction</li> <li>• reliability of equipment</li> <li>• location</li> <li>• what has gone before</li> <li>• competition</li> <li>• repetition</li> <li>• cost (financial and human)</li> <li>• the public's view and reaction</li> <li>• personal sacrifice.</li> </ul> <p><b>in the context of</b></p> <ul style="list-style-type: none"> <li>• a new musical work</li> <li>• a film or television drama</li> <li>• a painting</li> <li>• a sculpture</li> <li>• a new building</li> <li>• a new season of clothing designs</li> <li>• a new novel in a series.</li> </ul> <p><i>Annotate using <b>D</b> for difficulties</i></p> <p><b>The exemplification is provided to give a general indication of the standards of achievement likely to have been shown by the candidates awarded the particular levels. The level awarded will depend, in practice, upon the extent to which the candidate has met the assessment objectives overall.</b></p> <p><b>Level 5</b> answers will look at a range of difficulties facing artists (AO1) by using complex reasoning and a good understanding of views, as well as clearly illustrative examples (AO2). There will be evidence of personal opinion and/or experience or preference to support ideas (AO3) as well as clear layout and accurate communication (AO4).</p> <p><b>Level 4</b> answers will look at a range of difficulties facing artists (AO1) by presenting a good understanding of views with examples (AO2). There will be some evidence of personal opinion or preference to support ideas (AO3) as well as good communication (AO4).</p> <p><b>Level 3</b> answers will show some understanding of the difficulties facing artists (AO1). The analysis will be relevant but superficial in content and structure (AO2/3). Communication will be clear and errors will not blur the understanding of the key points (AO4).</p>	<p>[30]</p> <p><b>27-30</b></p> <p><b>21-26</b></p> <p><b>13-20</b></p>

<b>Section B</b>		
<b>Question Number</b>	<b>Answer</b>	<b>Marks</b>
	<p><b>Level 2</b> answers will concentrate on one reference to change and difficulties and fail to adequately support the points made (AO1/2). There will be an absence of personal opinion and the ideas will mostly not be linked and unstructured (AO3). Communication will display weaknesses which hamper clear understanding (AO4).</p>	<b>8-12</b>
	<p><b>Level 1</b> answers will lack clear understanding and knowledge (AO1) without any really clear understanding. There will be little or no evidence of personal experience or any evaluation (AO3). Communication will be weak and will be very briefly stated. (AO4).</p>	<b>1-7</b>
<b>Section B Total</b>		<b>[30]</b>

Section C		
Question Number	Answer	Marks
5 (a)	<p><b>Suggest <u>one</u> way in which public transport in Europe ‘regularly shows us up’ [line 1].</b></p> <ul style="list-style-type: none"> <li>• efficiency</li> <li>• cleanliness</li> <li>• reliability.</li> </ul> <p><i>One mark for simple suggestion and two further marks for its development through such dimensions as detail, examples, reasons or justification.</i></p>	[3]
(b)	<p><b>Give <u>two</u> reasons for the popularity of light rail systems.</b></p> <ul style="list-style-type: none"> <li>• they can use existing track and get right into the heart of a city centre</li> <li>• they display quality and are reliable – new rolling stock/modern and appealing</li> <li>• they are comfortable and ‘different’ (‘exciting’ – line 13]</li> <li>• they are environmentally ‘clean’</li> <li>• congestion and problems in using the car.</li> </ul> <p><i>Candidates may be awarded 1 mark for a simple statement or up to 3 marks for a developed answer. Annotate using <b>R</b> for reason and <b>D</b> for development. 2x3=6</i></p>	[6]
(c)	<p><b>Explain <u>two</u> ways that ‘light rail systems can introduce new life into tired city centres.’ [lines 20 – 21]</b></p> <ul style="list-style-type: none"> <li>• new light rail means new stations and new trams which will brighten and enliven the cities</li> <li>• members of the public who have been reluctant to visit the city due to the unreliability of trains and buses may now pursue a new interest and this will benefit business and commerce</li> <li>• new life is introduced by a new generation of visitors with the confidence to travel to the city knowing that they will get there and back safely.</li> <li>• an efficient transport system such as this is an important aspect of the growth of tourism (as in cities such as Munich, Amsterdam, and Prague)</li> <li>• they can provide building work and generate jobs.</li> </ul> <p><i>This offers a fairly open-ended response for candidates to earn marks by their ability to put forward valid ways in a reasoned fashion and possibly with reference to personal experience. Simple reference to a way would generate 1 mark. To gain maximum marks candidates would need to explain and develop their idea. Annotate using <b>W1</b>, <b>W2</b> for ways and <b>D</b> for development.</i></p>	[6]

Section C		
Question Number	Answer	Marks
(d)	<p><b>Outline <u>two</u> further examples of alternatives to using cars to commute from home to work or school, bringing out both advantages and disadvantages.</b></p> <ul style="list-style-type: none"> <li>• bus – particularly important for those living in rural and isolated districts</li> <li>• trains – very efficient and important in a large metropolis but also in countries such as Switzerland or even the narrow gauge railways of Wales which link mountain villages and towns in Snowdonia, for example</li> <li>• bicycles – increasingly popular and efficient due to modern designs and improved safety – reference to Holland and Belgium, Oxford and Cambridge would be helpful to support</li> <li>• walking – increasing parents' awareness of childhood fitness by discouraging the 'school run' in favour of walking to school</li> <li>• relocation – no need for a vehicle</li> <li>• working from home.</li> </ul> <p>Advantages and disadvantages may include:</p> <ul style="list-style-type: none"> <li>• cost</li> <li>• convenience</li> <li>• reliability</li> <li>• personal safety</li> <li>• the environment</li> <li>• personal preference.</li> </ul> <p><i>Examiners should look for two well-constructed, reasoned and supported responses. This would include reference to both advantages and disadvantages.</i></p> <p><i>Maximum 15 marks:</i></p> <ul style="list-style-type: none"> <li>• <i>two thoroughly developed examples which are coherent and supported with relevant background knowledge</i> [13-15]</li> <li>• <i>two developed examples with some support and background knowledge</i> [9-12]</li> <li>• <i>two examples covered but without clear support and reasoned background knowledge</i> [5-8]</li> <li>• <i>a simple interpretation of the question without clear background or support.</i> [1-4]</li> </ul> <p><i>If only one alternative form of transport is covered award 8 marks maximum.</i></p> <p><b>Annotate using eg 1,2 for examples and + for advantages and – disadvantages.</b></p>	[15]
<b>Section C Total</b>		<b>[30]</b>



Section D						
Question Number	Answer	Marks				
6	<p><b>A referendum allows voters to have their say on a single major issue. Outline and discuss the main arguments for <u>and</u> against referenda taking place in the UK.</b></p> <p><b>Referenda</b> are an important part of the democratic machinery of a country as there is no real way of knowing whether all of the voters in an election actually supported all of the issues that the party put forward.</p> <p>A <b>referendum</b> allows for a single question to be put where the answer is 'yes' or 'no' so that the electorate can vote on one issue. It is a good way to ensure that major laws cannot be changed without the consent of the people and remains a strong weapon in the armoury of any opposition.</p>	[30]				
	<table border="1"> <thead> <tr> <th>Arguments for</th> <th>Arguments against</th> </tr> </thead> <tbody> <tr> <td> <ul style="list-style-type: none"> <li>they encourage people to participate in government</li> <li>they provide a single, clear answer</li> <li>they increase the legitimacy of major government measures</li> <li>they enable politicians to keep in touch with the country's mood</li> <li>they provide a mandate from the electorate on controversial measures.</li> </ul> </td> <td> <ul style="list-style-type: none"> <li>they undermine Parliament</li> <li>the phrasing of the question is very important</li> <li>voters may lack sufficient information to give a judgement</li> <li>the issue may be too complex for 'yes' or 'no'</li> <li>the problem of apathy</li> <li>the decision is not always final.</li> </ul> </td> </tr> </tbody> </table>		Arguments for	Arguments against	<ul style="list-style-type: none"> <li>they encourage people to participate in government</li> <li>they provide a single, clear answer</li> <li>they increase the legitimacy of major government measures</li> <li>they enable politicians to keep in touch with the country's mood</li> <li>they provide a mandate from the electorate on controversial measures.</li> </ul>	<ul style="list-style-type: none"> <li>they undermine Parliament</li> <li>the phrasing of the question is very important</li> <li>voters may lack sufficient information to give a judgement</li> <li>the issue may be too complex for 'yes' or 'no'</li> <li>the problem of apathy</li> <li>the decision is not always final.</li> </ul>
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<p><i>There may be scope for other possibilities on both sides. It will be important for candidates to discuss their chosen arguments for and arguments against and not simply to name them.</i></p> <p><i>Annotate using <b>A+</b> for arguments for and <b>A-</b> for arguments against.</i></p> <p><b>The exemplification is provided to give a general indication of the standards of achievement likely to have been shown by the candidates awarded the particular levels. The level awarded will depend, in practice, upon the extent to which the candidate has met the assessment objectives overall.</b></p>						
<p><b>Level 5</b> answers will look at several arguments for and against referenda (AO1) by using complex reasoning and a good understanding of views, as well as clearly illustrative examples (AO2). There will be evidence of personal opinion and/or experience or preference to support ideas (AO3) as well as clear layout and accurate communication (AO4).</p> <p><b>Level 4</b> answers will look at some arguments for and against referenda (AO1) by using some reasoning and an understanding of views as well as some examples (AO2). There will be some evidence of personal opinions or preference to support ideas (AO3) as well as accurate communication (AO4).</p> <p><b>Level 3</b> answers will show some understanding of the arguments for and against referenda (AO1). The analysis will be relevant but superficial in content and structure (AO2/3). Communication will be clear and errors will not blur the understanding of the key points (AO4).</p>	<p><b>27-30</b></p> <p><b>21-26</b></p> <p><b>13-20</b></p>					

Section D		
Question Number	Answer	Marks
	<p><b>Level 2</b> answers will concentrate on one or two references to referenda or perhaps see only one point of view inadequately supporting the points made (AO1/2). There will be an absence of personal opinion and the ideas will mostly be not linked and unstructured (AO3). Communication will display weaknesses which hamper clear understanding (AO4).</p>	<b>8-12</b>
	<p><b>Level 1</b> answers will lack clear understanding and knowledge (AO1) without any really clear understanding. There will be little or no evidence of personal experience or any evaluation (AO3). Communication will be weak and will be very briefly stated. (AO4).</p>	<b>1-7</b>

Section D		
Question Number	Answer	Marks
7	<p><b>What have been the advantages and disadvantages of state controlled industries in the UK?</b></p> <p>Many state industries in the 1980s and 1990s were privatised by:</p> <ul style="list-style-type: none"> <li>• sales of shares</li> <li>• selling council houses to tenants</li> <li>• contracting out services to private companies.</li> </ul> <p>Companies that have been state controlled are :</p> <ul style="list-style-type: none"> <li>• Post Office</li> <li>• Utilities</li> <li>• Steel</li> <li>• Motor cars.</li> </ul> <p><b>Disadvantages</b></p> <ul style="list-style-type: none"> <li>• less efficient due to lack of free market competition – this would lead to higher prices</li> <li>• they are more bureaucratic</li> <li>• they have a political agenda</li> <li>• they are easily corruptible</li> <li>• waste of taxpayer's money</li> <li>• no profit element</li> <li>• no efficiency</li> <li>• no accountability to managers and shareholders</li> <li>• private companies find it easier to raise capital than state controlled</li> <li>• no profits can be generated and shared</li> <li>• pressure on public funding</li> <li>• less choice for the consumer.</li> </ul> <p><b>Advantages</b></p> <ul style="list-style-type: none"> <li>• a government is accountable to the people</li> <li>• the general public some control over the government through the ballot box</li> <li>• governments can raise money more cheaply</li> <li>• government ministers and MPs are less likely to be corruptible</li> <li>• civil liberties can be threatened</li> <li>• conflicts over profitability and service levels</li> <li>• more attention to health and safety.</li> </ul>	[30]

Section D		
Question Number	Answer	Marks
	<p><i>There may be several other possibilities which candidates may include but it will be very important to develop and explain their chosen points.</i></p> <p><i>Annotate using + for advantages and – for disadvantages.</i></p> <p><b>The exemplification is provided to give a general indication of the standards of achievement likely to have been shown by the candidates awarded the particular levels. The level awarded will depend, in practice, upon the extent to which the candidate has met the assessment objectives overall.</b></p> <p><b>Level 5</b> answers will look at the advantages and disadvantages of state controlled industries (AO1) by using complex reasoning and a good understanding of ideas, as well as clearly illustrative examples (AO2). There will be evidence of personal opinion and/or experience or preference to support ideas (AO3) as well as clear layout and accurate communication (AO4).</p> <p><b>Level 4</b> answers will look at the advantages and disadvantages of state controlled industries (AO1) by showing a good understanding of ideas and some examples (AO2). There will be evidence of some personal opinion and preference to support ideas (AO3) as well as accurate communication (AO4).</p> <p><b>Level 3</b> answers will show some understanding of the advantages and disadvantages of state controlled industries (AO1). The analysis will be relevant but superficial in content and structure (AO2/3). Communication will be clear and errors will not blur the understanding of the key points (AO4).</p> <p><b>Level 2</b> answers will concentrate on one single reference to change and difficulties and fail to adequately support the points made (AO1/2). There will be an absence of personal opinion and the ideas will mostly be not linked and unstructured (AO3). Communication will display weaknesses which hamper clear understanding (AO4).</p> <p><b>Level 1</b> answers will lack clear understanding and knowledge (AO1) without any really clear understanding. There will be little or no evidence of personal experience or any evaluation (AO3). Communication will be weak and will be very briefly stated. (AO4).</p>	<p><b>27-30</b></p> <p><b>21-26</b></p> <p><b>13-20</b></p> <p><b>8-12</b></p> <p><b>1-7</b></p>

Section D		
Question Number	Answer	Marks
8	<p><b>Identify <u>two</u> groups of people whom you consider to be socially excluded. For each one, discuss ways in which they might be successfully integrated into society.</b></p> <p><b>Groups that could be socially excluded</b></p> <ul style="list-style-type: none"> <li>• ethnic minorities by way of language, cultural diversity, cuisine, fashion</li> <li>• homosexuals</li> <li>• the poor and homeless</li> <li>• non-educated</li> <li>• disabled.</li> </ul> <p><b>Ways of tackling their plight</b></p> <ul style="list-style-type: none"> <li>• government financial intervention</li> <li>• language schools</li> <li>• different sorts and styles of education to suit all</li> <li>• tolerance within society</li> <li>• support groups in the community</li> <li>• voluntary aid agencies' support</li> <li>• greater understanding of problems through hands-on involvement (homeless and disabled)</li> <li>• positive help from the media.</li> </ul> <p><i>The essay involves the selection of two groups – this is not an exhaustive list – and the discussion of practical ways to end their plight. It offers scope to discuss local, regional, national and world issues. All of these are relevant and interchangeable.</i></p> <p><i>Annotate using <b>G1, G2</b> for groups and <b>T+</b> for tackling the problem.</i></p> <p><b>The exemplification is provided to give a general indication of the standards of achievement likely to have been shown by the candidates awarded the particular levels. The level awarded will depend, in practice, upon the extent to which the candidate has met the assessment objectives overall.</b></p> <p><b>Level 5</b> answers will look at two named groups in detail (AO1) by using complex reasoning and a good understanding of ideas, as well as clearly illustrative examples (AO2). There will be evidence of personal opinion and/or experience or preference to support ideas leading to successful tackling of the situation (AO3) as well as clear layout and accurate communication (AO4).</p> <p><b>Level 4</b> answers will look at two named groups in some detail (AO1) by showing a good understanding of ideas and examples (AO2). There will be some evidence of personal opinion or preference to support ideas (AO3) as well as clear communication (AO4).</p> <p><b>Level 3</b> answers will name two groups and some of the associated problems (AO1). The analysis will be relevant but superficial in content and structure (AO2/3). Communication will be clear and errors will not blur the understanding of the key points (AO4).</p>	<p>[30]</p> <p><b>27-30</b></p> <p><b>21-26</b></p> <p><b>13-20</b></p>

<b>Section D</b>		
<b>Question Number</b>	<b>Answer</b>	<b>Marks</b>
	<p><b>Level 2</b> answers will be superficial, perhaps referring to one single group only and fail to adequately support the points made (AO1/2). There will be an absence of personal opinion and the ideas will mostly be not linked and unstructured (AO3). Communication will display weaknesses which hamper clear understanding (AO4).</p> <p><b>Level 1</b> answers will lack clear understanding and knowledge (AO1) without any really clear understanding. There will be little or no evidence of personal experience or any evaluation (AO3). Communication will be weak and will be very briefly stated. (AO4).</p>	<p><b>8-12</b></p> <p><b>1-7</b></p>
<b>Section D Total</b>		<b>[30]</b>
<b>Paper Total</b>		<b>[120]</b>

# F732 The Scientific Domain

## Guidance for Examiners

### Do not use ticks.

Use the following annotations. (In any one script you are not expected to use all of these.)

Yes	recognises a point worthy of credit
Dev	a developed point or development of a point
No	a content error
NAQ	not answering the question
eg	appropriate example
Sp/G/Eng	spelling, grammar and language error; you are not expected to correct all of them
(...)	indicates a choice or a key phrase
Rubric	rubric infringement
D	description
R	reason
Rep	repetition, often of the question
Ev	evaluation

## Stages to an essay mark

Read and annotate the candidate's response.

Review your annotation and then consider in which level the answer is located.

Consider its position within the level and a possible mark.

Fine tune the mark by considering the Assessment Objectives.

Write a one or more line comment reflecting the AO statements.

eg	AO1	good knowledge very limited knowledge and eg
	AO2	examples given
	AO3	personal experience relevant restricted personal experience
	AO4	clearly written inaccurate Spg


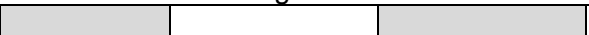
Enter the final mark in a circle.

## Generic Mark Scheme for Questions with 30 marks

<b>AO1</b>	<b>Level Descriptor</b> The candidate demonstrates the following abilities where appropriate to:	<b>Marks</b>
<b>Level 5</b>	<ul style="list-style-type: none"> <li>select, use and integrate a very good range of relevant knowledge</li> <li>show a good understanding of the concepts involved</li> </ul>	<b>8</b>
<b>Level 4</b>	<ul style="list-style-type: none"> <li>select, use and integrate a good range of relevant knowledge</li> <li>show an understanding of the concepts involved</li> </ul>	<b>6-7</b>
<b>Level 3</b>	<ul style="list-style-type: none"> <li>select, use and integrate a range of relevant knowledge</li> <li>show an adequate understanding of the concepts involved</li> </ul>	<b>4-5</b>
<b>Level 2</b>	<ul style="list-style-type: none"> <li>select, use and integrate a limited range of relevant knowledge</li> <li>show a modest understanding of the concepts involved</li> </ul>	<b>2-3</b>
<b>Level 1</b>	<ul style="list-style-type: none"> <li>select, use and integrate some knowledge which may not be accurate</li> <li>show a restricted understanding of the concepts involved.</li> </ul>	<b>1</b>
<b>AO2</b>	<b>Level Descriptor</b> The candidate demonstrates the following abilities where appropriate to:	
<b>Level 5</b>	<ul style="list-style-type: none"> <li>interpret and analyse issues and problems well and evaluates them appropriately</li> <li>use evidence to develop complex reasoned arguments and draw sound conclusions on the evidence</li> </ul>	<b>9-10</b>
<b>Level 4</b>	<ul style="list-style-type: none"> <li>interpret and analyse issues and problems well and evaluates them competently</li> <li>use evidence to develop reasoned arguments and draw sound conclusions on the evidence</li> </ul>	<b>7-8</b>
<b>Level 3</b>	<ul style="list-style-type: none"> <li>undertake some interpretation and analysis of issues and problems and make a superficial evaluation</li> <li>use evidence to develop arguments and draw conclusions</li> </ul>	<b>5-6</b>
<b>Level 2</b>	<ul style="list-style-type: none"> <li>demonstrate limited interpretation and analysis of issues and problems with limited evaluation</li> <li>use evidence to develop limited arguments and draw limited conclusions</li> </ul>	<b>3-4</b>
<b>Level 1</b>	<ul style="list-style-type: none"> <li>demonstrate poor interpretation and analysis of issues, problems and evaluation</li> <li>recognise arguments and conclusion</li> </ul>	<b>1-2</b>



AO3	<p style="text-align: center;"><b>Level Descriptor</b> The candidate demonstrates the following abilities where appropriate to:</p>	Marks
<b>Level 5</b>	<ul style="list-style-type: none"> <li>• demonstrate very good awareness of the differences between types of knowledge</li> <li>• have a very good appreciation of the strengths and limitations of the different types of knowledge</li> </ul>	<b>6</b>
<b>Level 4</b>	<ul style="list-style-type: none"> <li>• demonstrate good awareness of the differences between types of knowledge</li> <li>• have a good appreciation of the strengths and limitations of the different types of knowledge</li> </ul>	<b>5</b>
<b>Level 3</b>	<ul style="list-style-type: none"> <li>• demonstrate awareness of the differences between types of knowledge</li> <li>• have an appreciation of the strengths and limitations of the different types of knowledge</li> </ul>	<b>4</b>
<b>Level 2</b>	<ul style="list-style-type: none"> <li>• demonstrate limited awareness of the differences between types of knowledge</li> <li>• have a restricted appreciation of the strengths and limitations of the different types of knowledge</li> </ul>	<b>3</b>
<b>Level 1</b>	<ul style="list-style-type: none"> <li>• demonstrate very limited awareness of the differences between types of knowledge</li> <li>• have a very restricted appreciation of the strengths and limitations of the different types of knowledge.</li> </ul>	<b>1-2</b>
AO4	<p style="text-align: center;"><b>Level Descriptor</b> The candidate demonstrates the following abilities where appropriate to:</p>	
<b>Level 5</b>	<ul style="list-style-type: none"> <li>• communicate complex ideas clearly and accurately , using specialist vocabulary where appropriate, in a concise, logical and relevant way</li> <li>• use a wide range of the rules of grammar, punctuation and spelling with accuracy and facility</li> </ul>	<b>6</b>
<b>Level 4</b>	<ul style="list-style-type: none"> <li>• communicate ideas clearly and accurately, using specialist vocabulary where appropriate, in a concise, logical and relevant way</li> <li>• Use a range of the rules of grammar, punctuation and spelling with</li> </ul>	<b>5</b>
<b>Level 3</b>	<ul style="list-style-type: none"> <li>• communicate clearly, using some specialist vocabulary with facility</li> <li>• use some of the rules of grammar, punctuation and spelling with facility</li> </ul>	<b>4</b>
<b>Level 2</b>	<ul style="list-style-type: none"> <li>• communicate ideas with limited clarity, using some specialist vocabulary</li> <li>• use some rules of grammar, punctuation and spelling</li> </ul>	<b>3</b>
<b>Level 1</b>	<ul style="list-style-type: none"> <li>• communicate with little clarity using occasional specialist terms</li> <li>• use poor grammar and punctuation, and inaccurate spelling.</li> </ul>	<b>1-2</b>

Section A					
Answer <b>all</b> of the questions in this section.					
1	Two ice cream sellers who are in competition arrive at a crowded beach. Fig. 1 shows where the two ice cream sellers set up their stalls on the beach.				
Fig. 1					
					
Fig. 2 shows another possible pair of locations for the sellers on the beach.					
Fig. 2					
					
(a)	<b>What reason might both ice cream sellers give for selecting their locations shown in Fig. 1?</b>				<b>[3]</b>
<b>Assessment Objectives</b>					
	<b>AO1</b>	<b>AO2</b>	<b>AO3</b>	<b>AO4</b>	
	<b>1</b>	<b>1</b>		<b>1</b>	
<p>This is the classic ‘Hotelling Ice Cream Seller’ location puzzle.</p> <p>The two end up in the middle of the beach so that their market is half the beach each. If either moves to one side the other follows and then commands more than half the beach. So in a position of competition suppliers tend to agglomerate at the centre of the market.</p> <p>When accepting answers examiners must expect responses that refer to spatial, economic or behavioural factors not idiosyncratic ones.</p> <p>Idiosyncratic factors could include:</p> <ul style="list-style-type: none"> <li>• liking the view</li> <li>• flatter area</li> <li>• near attractive lifeguards.</li> </ul> <p>One mark for each simple idea or two for a developed idea.</p> <p>Key ideas include:</p> <ul style="list-style-type: none"> <li>• half the beach each means half the customers nearer</li> <li>• can observe competition</li> <li>• attract competitor customers</li> <li>• confident of comparison of goods.</li> <li>• can be seen all over the beach</li> <li>• comparison/the best ice cream</li> <li>• same numbers on each side</li> <li>• people got to the cheapest if they are close together</li> <li>• allows choice</li> <li>• to see how the other is doing</li> <li>• selling to the whole beach</li> <li>• in the middle of everyone.</li> </ul>					

	<p>No marks awarded for:</p> <ul style="list-style-type: none"> <li>close to the busy part of the beach</li> <li>close to the children and the sea</li> <li>share customers.</li> </ul> <p>The AO4 mark should be awarded for clarity of explanation and shown inside the margin.</p>	
(b)	<b>Why would the locations shown in Fig. 2 be better than those in Fig 1 for customers on the beach?</b>	<b>[3]</b>
	<b>Assessment Objectives</b>	
	<b>AO1</b>	<b>AO2</b>
	<b>1</b>	<b>1</b>
		<b>AO3</b>
		<b>1</b>
		<b>AO4</b>
		<b>1</b>
	<p>Hotelling refers to this as planned provision. Competition is removed. This suits the customers on the beach because they have the least distance to walk to get to a supply point.</p> <p>When accepting answers examiners must expect responses that refer to spatial, economic or behavioural factors not or idiosyncratic ones.</p> <p>Idiosyncratic factors could include:</p> <ul style="list-style-type: none"> <li>near the toilets</li> <li>out of the wind</li> <li>close to funfair.</li> </ul> <p>Key ideas include:</p> <ul style="list-style-type: none"> <li>less or least distance to walk on average</li> <li>central customers can still select</li> <li>avoids crowding.</li> <li>closer to the people on the beach</li> <li>less congestion</li> <li>visible to more people.</li> </ul> <p>One mark for each simple idea or two for a developed idea.</p> <p>No marks awarded for:</p> <ul style="list-style-type: none"> <li>shorter queues</li> <li>rates will be more competitive</li> <li>less competition</li> <li>clear line of sight</li> <li>more space to relax</li> <li>facing away from each other.</li> </ul> <p>The AO4 mark should be awarded for clarity of explanation and shown inside the margin.</p>	

	(c)	<b>How might the thinking behind the location of the two ice cream sellers in Fig. 1 and Fig. 2 be applied more generally to the location of shops?</b>				<b>[6]</b>
		<b>Assessment Objectives</b>				
		<b>AO1</b>	<b>AO2</b>	<b>AO3</b>	<b>AO4</b>	
		<b>2</b>	<b>2</b>		<b>2</b>	
		<p>Shops that are in competition, where comparison decisions dominate, tend to locate near to each other. This means shops pick up shoppers from their competitor store. This matches Fig 1.</p> <p>Shops needing a catchment area to serve, where convenience dominates, will locate near to customers and where possible away from competitors. This would apply to corner shops and fish and chips shops. It would have applied to post offices in the past and some public houses.</p> <p>Maximum 5 marks if both figures not represented</p> <p>The two AO4 marks should be awarded for clarity of explanation and shown inside the margin.</p>				

2	(a)	Examine Fig. 3 which shows a number square.					
		Fig. 3					
			8	1	6		
			3	5	7		
			4	9	2		
		<b>What do you notice about the pattern of numbers in the square?</b>					<b>[3]</b>
		<b>Assessment Objectives</b>					
		<b>AO1</b>	<b>AO2</b>	<b>AO3</b>	<b>AO4</b>		
		<b>3</b>					
		1 mark for columns, 1 for rows and 1 for diagonals but total 15 essential [3] Same in all directions [1] 15 [1] Corners even numbers, others odd (1 mark) Reject 'no repeated numbers', 'total is 45'					
	(b)	A mathematician named Mersenne devised some numbers that are given by the formula $2^n - 1$ .					
		For example if $n = 2$ the Mersenne number would be 3.					
	(i)	<b>Calculate the value of the Mersenne numbers for values of n from 3 to 6.</b>					<b>[4]</b>
		<b>Assessment Objectives</b>					
		<b>AO1</b>	<b>AO2</b>	<b>AO3</b>	<b>AO4</b>		
		<b>3</b>	<b>1</b>				
		There are two steps here. The candidates have to interpret the information given and then show that they know how to calculate.					
		$2^3 - 1 = 7$ $2^4 - 1 = 15$ $2^5 - 1 = 31$ $2^6 - 1 = 63$					
		One mark for each.					

		(ii)	What pattern do you discover for the Mersenne numbers for values of n from 2 to 6?	[5]
			<b>Assessment Objectives</b>	
			<b>AO1</b>	<b>AO2</b>
			<b>3</b>	<b>1</b>
				<b>AO3</b>
				<b>AO4</b>
				<b>1</b>
			$2^2-1=3$ $2^3-1=7$ $2^4-1=15$ $2^5-1=31$ $2^6-1=63$	
			<p>The pattern is that each increases by a power of 2.                  The differences are 2, 4,8,16 that <math>2^1, 2^2, 2^3, 2^4</math>.</p> <p>Two marks for noting the pattern of differences.</p> <p>Two marks for putting this in index/power form or an equivalent.</p> <p>One mark for summary at end. (AO4).</p> <p>Allow five marks for one summary statement that covers all aspects explicitly.</p> <p>The AO4 mark should be awarded for clarity of explanation and shown inside the margin.</p> <p>All odd numbers [1] Odd numbers explained [1] AO4 [1]                  Not able to find whole numbers square roots [1] Explained [1] AO4 [1]                  Double the difference of the previous two [2] Explained [2] AO4 [1]                  Times two and add one [2] Explained [2] AO4 [1]</p> <p>The key point here is reference to a pattern.</p>	

		(iii)	<p><b>Prime numbers are those numbers greater than 1 that cannot be divided by any number except themselves and one.</b></p> <p><b>Show that when <math>n=4</math> and <math>n=6</math> the Mersenne numbers generated are not prime numbers.</b></p>	[6]
			<b>Assessment Objectives</b>	
			<b>AO1</b>	<b>AO2</b>
			<b>3</b>	<b>2</b>
				<b>AO3</b>
				<b>AO4</b>
				<b>1</b>
			<p>A little history for interest.</p> <p>Many early writers felt that the numbers of the form <math>2^n-1</math> were prime for <i>all</i> values of <math>n</math>, but in 1536 Hudalricus Regius showed that <math>2^{11}-1 = 2047</math> was not prime (it is 23 times 89). By 1603 Pietro Cataldi had correctly verified that <math>2^{17}-1</math> and <math>2^{19}-1</math> were both prime, but then incorrectly stated <math>2^n-1</math> was also prime for 23, 29, 31 and 37. In 1640 Fermat showed Cataldi was wrong about 23 and 37; then Euler in 1738 showed Cataldi was also wrong about 29. Sometime later Euler showed Cataldi's assertion about 31 was correct.</p> <p>Enter French monk Marin Mersenne (1588-1648). Mersenne stated in the preface to his <i>Cogitata Physica-Mathematica</i> (1644) that the numbers <math>2^n-1</math> were prime for <math>n = 2, 3, 5, 7, 13, 17, 19, 31, 67, 127</math> and 257</p> <p>Prime numbers do not have factors.</p> <p><math>2^4-1=15</math> and has factors 5 and 3.  <math>2^6-1=63</math> and has factors 7 and 9 or 7, 3, 3.</p> <p>One mark for recognising nature of a prime number.  Two marks for showing <math>n=4</math> is not prime.  Two marks for showing <math>n=6</math> is not a prime.  One mark for clarity of explanation.  The AO4 mark should be awarded for clarity of explanation and shown inside the margin.</p> <p>Loss of marks if 2 (b)(i) incorrectly answered = 15 marks lost (25% of the paper). Consider the two alternate yet incorrect outcomes</p> <p>(i) <math>2 \times 2-1=3</math> <math>2 \times 3-1=5</math> <math>2 \times 4-1=7</math> <math>2 \times 5-1=9</math> <math>2 \times 6-1=11</math> [No marks]</p> <p>(ii) pattern is all odd numbers going up in twos. Suggested mark allocation [2 plus 1 for AO4]</p> <p>(iii) <math>N=4</math> mersenne Number = 7, <math>N=6</math> Mersenne number = 11. Both prime numbers [No Marks]</p> <p>(i) <math>2^2-1=3</math> <math>3^2-1=8</math> <math>4^2-1=15</math> <math>5^2-1=24</math> <math>6^2-1=35</math> [No Marks]</p> <p>(ii) Pattern where the difference goes up odd numbers plus 2  Difference 5,7,9,11 [2 plus 1 for AO4]</p> <p>(iii) <math>4^2-1=15</math> and <math>6^2-1=35</math> Proof that they are not prime [max 6]  Other incorrect interpretations of the Mersenne formula could be treated in the same way.</p>	

<b>Section B</b>					
Answer <b>one</b> question from this section. Answers must be in continuous prose.					
<b>3</b>	<b>Surgeons regularly perform successful organ transplants but the extent of their work is restricted by a lack of available organs from volunteer donors.</b>				
	<b>Describe <u>two</u> arguments for and <u>two</u> against the compulsory donation of organs to hospitals.</b>				<b>[30]</b>
<b>Assessment Objectives</b>					
	<b>AO1</b>	<b>AO2</b>	<b>AO3</b>	<b>AO4</b>	
	<b>8</b>	<b>10</b>	<b>6</b>	<b>6</b>	
This question involves:					
<ul style="list-style-type: none"> <li>• recognising the difference between voluntary and compulsory systems</li> <li>• describing two arguments in favour of compulsory donation</li> <li>• describing two arguments against compulsory donation.</li> </ul>					
<b>Indicative content</b>					
<p>In 2007 there is debate that the current voluntary system be replaced by an assumed consent system. This question takes the argument a little further.</p> <p>Arguments in favour of compulsory donation include:</p> <ul style="list-style-type: none"> <li>• people are dying for lack of volunteers</li> <li>• medical progress may be held back</li> <li>• many recipients of donor organs have full life after the operation</li> <li>• waste of healthy organs.</li> </ul> <p>Arguments against compulsory donation include:</p> <ul style="list-style-type: none"> <li>• infringement of personal space</li> <li>• individuals right to decide</li> <li>• wishes of the family</li> <li>• religious aspects</li> <li>• at what point is the compulsion exercised/enforcement</li> <li>• dangers of medical research, 'harvesting'</li> <li>• increasing limits of transplant surgery eg faces.</li> </ul> <p>Examiners should not be too restrictive about which organs are available for transplantation.</p> <p>Allow tissue, skin, blood, marrow and cornea of the eye.</p>					



Level	Descriptors	Marks
<b>Level 5</b>	These candidates will recognise the two systems. They will give two developed reasons for and two against the extension of the presumption. Their answers will be very clear and written with accuracy and facility.	<b>27-30</b>
<b>Level 4</b>	These candidates will recognise the two systems. They will give two reasons for and two reasons against the extension of the system. Two of these four will be developed. Their answers will be clear and accurate with few limitations on their SPG	<b>21-26</b>
<b>Level 3</b>	These candidates will give two reasons for and two against the extension of the system of presumption. The answers will tend to be unbalanced. Their answers will be clear with some limitations to their SPG.	<b>13-20</b>
<b>Level 2</b>	These candidates will tend to miss one of the four elements of the question or one will be present in fragmentary terms. Their answers will not be clear with insecurity to their SPG.	<b>8-12</b>
<b>Level 1</b>	These candidates will miss two elements of the question. Their answers will lack clarity using poor grammar and punctuation and inaccurate spelling.	<b>1-7</b>
	<b>Recommended annotation</b>	
	<b>Intro</b> for introduction <b>F1 and F2</b> , for arguments in favour of compulsory donation <b>A1 and A2</b> for arguments against compulsory donation. <b>Dev</b> for development <b>Con.</b> for conclusion.	

<b>4</b>	<b>Scientists are able to forecast with some accuracy certain events.</b>				<b>[30]</b>
	<b>Describe <u>one</u> type of event where forecasts have proved helpfully accurate and <u>one</u> where they have been less accurate. Suggest <u>two</u> reasons for the difference in the accuracy of forecasts.</b>				
	<b>Assessment Objectives</b>				
	<b>AO1</b>	<b>AO2</b>	<b>AO3</b>	<b>AO4</b>	
	<b>8</b>	<b>10</b>	<b>6</b>	<b>6</b>	
	This question involves: <ul style="list-style-type: none"> <li>• recognition of what forecasting involves</li> <li>• description of helpful forecasts</li> <li>• description of less accurate forecasts.</li> </ul>				
	<b>Indicative content</b>  It is difficult to give precise information because of the wide choice available.  Probable accurate forecasts include: <ul style="list-style-type: none"> <li>• weather forecasting</li> <li>• population prediction eg life expectancy</li> <li>• traffic flow</li> <li>• hurricane tracks</li> <li>• related to astronomy</li> <li>• prediction of disease spread</li> <li>• climate change.</li> </ul> Less accurate forecasts include: <ul style="list-style-type: none"> <li>• earthquakes</li> <li>• volcanic eruptions</li> <li>• medical treatment outcomes</li> <li>• biodiversity measurements</li> <li>• climate change</li> <li>• economic trends.</li> </ul> Examiners should be alert and flexible in that some forecasts may appear in either list eg climate change. The description given should determine their acceptability.  Reasons for the difference could include: <ul style="list-style-type: none"> <li>• lack of data</li> <li>• complexity of the system</li> <li>• rapidity of change</li> <li>• unknown processes</li> <li>• progress with scientific inventions</li> <li>• level of economic wealth</li> <li>• time scale involved.</li> </ul>				

Level	Descriptors	Marks
<b>Level 5</b>	These candidates will develop descriptions of both helpfully accurate and less accurate forecasts. They will give two very good reasons for the differences between them. Their answers will be very clear and written with accuracy and facility.	<b>27-30</b>
<b>Level 4</b>	These candidates will include all three parts of the question but only two of them will be developed. Their answers will be clear and accurate with few limitations on their SPG	<b>21-26</b>
<b>Level 3</b>	These candidates will attempt all three parts of the question but only one of them will be developed leading to some imbalance. There will be some insecurity in their analysis of reasons. Their answers will be clear with some limitations to their SPG.	<b>13-20</b>
<b>Level 2</b>	These candidates will include some material on each of the three parts of the question. Two of these will probably be fragmentary. Their answers will not be clear with insecurity to their SPG.	<b>8-12</b>
<b>Level 1</b>	These candidates will include material on two of the three parts of the question. Their answers will lack clarity using poor grammar and punctuation and inaccurate spelling.	<b>1-7</b>
	<b>Recommended annotation</b>	
	<b>Intro</b> for introduction <b>H</b> for descriptions of event where forecast was helpful <b>U</b> for descriptions of event where forecasts were less accurate <b>R1 and R2</b> for reasons for the differences <b>Dev</b> for development <b>eg</b> for examples <b>Conc.</b> for conclusion.	

5	<p><b>‘People say that hindsight is 20:20.’</b></p> <p><b>Describe an environmental problem with which you are familiar. Explain how people have attempted to manage the issue. How might hindsight suggest an alternative plan?</b></p>				[30]
<b>Assessment Objectives</b>					
<b>AO1</b>		<b>AO2</b>		<b>AO3</b>	<b>AO4</b>
8		10		6	6
<p>This question involves:</p> <ul style="list-style-type: none"> <li>• description of an environmental problem</li> <li>• explanation of how people have attempted to manage the problem</li> <li>• explaining how hindsight might suggest an alternative plan.</li> </ul>					
<b>Indicative content</b>					
<p>20:20 suggests that problems or events can be seen more clearly in retrospect. It has its origins in optometry. The 20 refers to the feet away for reading accurately a particular chart.</p> <p>Sports fans are said to be 20:20 in that they see things perfectly from 100 metres that the umpire did not see from 6 metres.</p> <p>Its application to environmental management could include pointing out unforeseen problems after a project is completed.</p> <p>Environmental problems that could be cited include:</p> <ul style="list-style-type: none"> <li>• housing estates that generate traffic congestion</li> <li>• out of town shopping areas that produce noise and congestion</li> <li>• water supply in terms of quality and reliability</li> <li>• flood protection schemes that fail</li> <li>• managing forests for sustainability</li> <li>• competition for land</li> <li>• using finite resources</li> <li>• village by-pass that created more noise for residents than original road through village</li> <li>• park and ride schemes</li> <li>• car parks at the edge of parks that become areas for social problems</li> <li>• regional water authorities that are not able to share water</li> <li>• large reservoirs in less economically developed countries</li> <li>• high-rise housing (streets in the sky) that became sink estates and centres for drugs and crime.</li> </ul> <p>Examiners are invited to be liberal in their interpretation of environmental management. Some problems that have to be managed have social and environmental aspects inter-linked.</p>					

Level	Descriptors	Marks
<b>Level 5</b>	These candidates will show a very good understanding of the term hindsight. They will develop a clear description of an environmental problem and how it has been managed. They will show how hindsight suggests an alternative way to manage the problem. Their answers will be very clear and written with facility.	<b>27-30</b>
<b>Level 4</b>	These candidates will show a good understanding of the term hindsight. They will develop a description of an environmental problem and how it has been managed. They will imply how hindsight suggests an alternative way to manage the problem. Their answers will be clear and accurate with few limitations on their SPG.	<b>21-26</b>
<b>Level 3</b>	These candidates will show some understanding of the term hindsight. They will be able to cite an environmental problem and how it has been managed in general terms. They will offer some limited link to the term hindsight. Their answers will be clear with some limitations to their SPG.	<b>13-20</b>
<b>Level 2</b>	These candidates will have a limited understanding of the term hindsight. They will include an environmental problem in limited terms with some suggestion of how it has been managed. The link of hindsight to the scheme will be fragmentary. Their answers will not be clear with insecurity to their SPG.	<b>8-12</b>
<b>Level 1</b>	They will include an environmental problem in limited terms with a poor suggestion of how it has been managed. Their answers will lack clarity using poor grammar and punctuation and accurate spelling.	<b>1-7</b>
	<b>Recommended annotation</b>	
	<b>Intro</b> for introduction. <b>H1, H2...</b> for points above hindsight. <b>D1, D2, D3</b> for description of the environmental management scheme chosen. <b>M1, M2, M3 ...</b> for explaining how it has been managed. <b>Ex1, Ex2...</b> for explaining how hindsight alters the view of the scheme. <b>Dev</b> for development. <b>Conc.</b> for conclusion.	

# Grade Thresholds

Advanced Subsidiary GCE General Studies (H079)  
June 2009 Examination Series

## Unit Threshold Marks

Unit		Maximum Mark	A	B	C	D	E	U
F731	Raw	120	93	84	75	66	58	0
	UMS	140	112	98	84	70	56	0
F732	Raw	60	50	44	39	34	29	0
	UMS	60	48	42	36	30	24	0

## Specification Aggregation Results

Overall threshold marks in UMS (ie after conversion of raw marks to uniform marks)

	Maximum Mark	A	B	C	D	E	U
H079	200	160	140	120	100	80	0

The cumulative percentage of candidates awarded each grade was as follows:

	A	B	C	D	E	U	Total Number of Candidates
H079	8.3	20.7	38.5	57.9	75.2	100	14724

## 14724 candidates aggregated this series

For a description of how UMS marks are calculated see:

[http://www.ocr.org.uk/learners/ums\\_results.html](http://www.ocr.org.uk/learners/ums_results.html)

Statistics are correct at the time of publication.

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