

General Studies

Advanced GCE

Unit **F734**: Culture, Science and Society: Making connections

Mark Scheme for June 2011

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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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Guidance for Examiners

Do not use ticks. It is essential that your annotations show clearly why marks have been awarded or withheld – your team leader will assess your annotation as well as your accuracy.

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 examples
Sp/G/Eng	spelling, grammar and language error; you are not expected to correct all of them
(...)	indicates a choice or a key phrase OR
Key	written beside an underlined choice or 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 **fully** the candidate's response, using any question specific annotations agreed at Standardisation.

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

Consider its position within the level and a possible mark.

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

Enter the final mark in a circle.

If bullet points are used where continuous prose is asked for, a maximum of 30 marks is available for a 50-mark question.

Generic Mark Scheme for questions worth 50 marks.**Levels descriptors****Level 5**

AO1	<ul style="list-style-type: none"> select, use and integrate a very good range of relevant knowledge show a good understanding of the concepts involved 	41-50
AO2	<ul style="list-style-type: none"> interpret and analysis issues and problems well and evaluate them appropriately use evidence to develop complex reasoned arguments and draw sound conclusions on the evidence 	
AO3	<ul style="list-style-type: none"> demonstrate very good awareness of the differences between types of knowledge have a very good appreciation of the strengths and limitations of the different types of knowledge 	
AO4	<ul style="list-style-type: none"> communicate complex ideas clearly and accurately, using specialist vocabulary where appropriate, in a concise, logical and relevant way use a range of the rules of grammar, punctuation and spelling with accuracy and facility. 	

Level 4

AO1	<ul style="list-style-type: none"> select, use and integrate a good range of relevant knowledge show an understanding of the concepts involved 	31-40
AO2	<ul style="list-style-type: none"> interpret and analyse issues and problems and evaluate them competently use evidence to develop reasoned arguments and draw conclusions on the evidence 	
AO3	<ul style="list-style-type: none"> demonstrate good awareness of the differences between different types of knowledge have a good appreciation of the strengths and limitations of the different types of knowledge 	
AO4	<ul style="list-style-type: none"> communicate ideas clearly and accurately, using specialist vocabulary where appropriate, in a concise, logical and relevant way use a range of the rules of grammar, punctuation and spelling with facility. 	

Level 3

AO1	<ul style="list-style-type: none"> select, use and integrate a range of relevant knowledge show an adequate understanding of the concepts involved 	21-30
AO2	<ul style="list-style-type: none"> undertake some interpretation and analysis of issues and problems and make a superficial evaluation use evidence to develop arguments and draw conclusions 	
AO3	<ul style="list-style-type: none"> demonstrate awareness of the differences between types of knowledge have an appreciation of the strengths and limitations of the different types of knowledge 	
AO4	<ul style="list-style-type: none"> communicate clearly, using some specialist vocabulary with facility use some of the rules of grammar, punctuation and spelling with facility. 	

Level 2

AO1	<ul style="list-style-type: none"> select, use and integrate a limited range of relevant knowledge show a modest understanding of the concepts involved 	11-20
AO2	<ul style="list-style-type: none"> demonstrate limited interpretation and analysis of issues and problems with limited evaluation use evidence to develop limited arguments and draw limited conclusions 	
AO3	<ul style="list-style-type: none"> demonstrate limited awareness of the differences between types of knowledge have a restricted appreciation of the strengths and limitations of the different types of knowledge 	
AO4	<ul style="list-style-type: none"> communicate ideas with limited clarity, using some specialist vocabulary use some rules of grammar, punctuation and spelling. 	

Level 1

AO1	<ul style="list-style-type: none"> select, use and integrate some knowledge which may not be accurate show a restricted understanding of the concepts involved 	0-10
AO2	<ul style="list-style-type: none"> demonstrate poor interpretation and analysis of issues, problems and evaluation recognise arguments and conclusion 	
AO3	<ul style="list-style-type: none"> demonstrate very limited awareness of the differences between types of knowledge have a very restricted appreciation of the strengths and limitations of the different types of knowledge 	
AO4	<ul style="list-style-type: none"> communicate with little clarity using occasional specialist terms use poor grammar and punctuation, and inaccurate spelling. 	

Q1 Using the sources and your own knowledge and experience, outline the cultural, scientific and social issues raised by developments in human genetic engineering such as those referred to. How far do you think such research should be allowed to go? [50]

Assessment Objective balance				
	AO1	AO2	AO3	AO4
Marks	10	15	15	10

The question involves:

- reading of the two sources for understanding of the issues raised by developments in human genetic engineering research
- use of knowledge and experience on the issues being raised by human genetic engineering research
- placing the issues raised into one or more of the three domains considering how far such research should be allowed to go.

Recommended annotation

Intro for introduction

Cu1, Cu2, Cu3... for cultural issues raised by genetic research

Sc1, Sc2, Sc3... for scientific issues raised by genetic research

So1, So2, So3... for social issues raised by genetic research

dev for development

Ev1, Ev2, Ev3 for evaluation of how far genetic research should go

Conc. for conclusion.

Indicative content

Issues raised by Source 1

- availability of gene removal on embryos to prevent hereditary breast cancer, cystic fibrosis and Huntingdon’s disease
- availability of gene diagnosis screening on foetuses
- Life League see this as thin end of wedge to ‘designer babies’
- cancer charities concerned about pressure on families with cancer history
- British Fertility Society says process is established and has not led to ‘designer babies’.

Issues raised by Source 2

- embryonic stem cells may be used to create human sperm
- better understanding of genetic diseases eg infertility
- concerns that this derived sperm could be used for fertility treatment.

Issues raised that could be placed in the cultural domain

- media tend to sensationalise developments with positive and negative consequences
- religious issues related to ‘creation’ and the role of ‘God’
- people wanting ‘designer babies’ with particular characteristics.

Issues raised that could be placed in the scientific domain

- value of increased understanding of how the body works
- costs of the research, alternative uses in the NHS/Research Councils for the finance
- should this be set as a priority by the NHS or Research Councils
- where will this lead eg treatment of the aged, humans ‘grown in a dish’
- could this lead to other diseases
- population increase on limited resources.

Issues raised that could be placed in the social domain

- legislation needed to control scientific developments
- demands on the NHS to meet needs and wants
- costs to the economy from those in need and the medical profession
- role of private companies and overseas agencies to deliver procedures not available in the UK
- will costs determine access and the gap between rich and poor
- social implications for those using these processes and for their products.

Synopticity: making connections

The challenge of this paper is for candidates to make connections across the domains. These could include:

- scientific curiosity (SC) circumscribed by the law (Soc)
- religious beliefs (Cu) not congruent with social attitudes (Soc)
- media attention (CU) playing positive and negative role in different communities (So)
- costs of scientific developments (Sc) may take funding from other social projects (So)
- demographic implications (Sc) may distort 'natural shape' of society
- forecasters (Sc) uncertain of a future where killer diseases eliminated (So).

These descriptors are intended as a first guide to examiners. They indicate the characteristics of a top level answer. Marks within a level are awarded when an answer does not include all the parts or qualities shown in the descriptor. Answers which are 'borderline' should be awarded the lowest mark in the level.		
Level 5	<ul style="list-style-type: none"> • these candidates will give a very good outline of the cultural, scientific and social issues raised by genetic research • they will give a very good analysis of these issues to develop complex reasoned arguments and draw sound conclusions on how far the research should go • they will have a very good awareness of the strengths and weaknesses of the information on genetic research being used • they will present an articulate, cogent and comprehensive answer. 	41-50
Level 4	<ul style="list-style-type: none"> • these candidates will give a good outline of the cultural, scientific and social issues raised by genetic research • they will give a good analysis of these issues to develop reasoned arguments and draw sound conclusions on how far the research should go • they will show a good awareness of the strengths and weaknesses of the information on genetic research being used • their response will be clear and coherent including all parts of the question. 	31-40
Level 3	<ul style="list-style-type: none"> • these candidates will give an adequate outline of the cultural, scientific and social issues raised by genetic research • they will give an adequate analysis of these issues to draw conclusions on how far the research should go • they will show an adequate awareness of the strengths and weaknesses of the information on genetic research being used • their response will be clear with very few errors of spelling and grammar. 	21-30
Level 2	<ul style="list-style-type: none"> • these candidates will give a limited outline of the cultural, scientific and social issues raised by genetic research • they will give a limited analysis of these issues and draw some conclusions on how far the research should go • they will show a limited awareness of the strengths and weaknesses of the information on genetic research being used • their response will lack clarity with some errors of spelling and grammar. 	11-20
Level 1	<ul style="list-style-type: none"> • these candidates will give a very limited outlines of the cultural, scientific and social issues raised by genetic research • they will give a very limited analysis of these issues • they will show very limited awareness of the strengths and weaknesses of the information on genetic research being used • their response will lack clarity with frequent errors of spelling or grammar. 	0-10

- Q2 Using the source and your own knowledge and experience, outline ways in which developments in culture, science and society have contributed to the problems of a 'me-first society'. How far do you believe individualism can be a benefit to society? [50]**

Assessment Objective balance				
	AO1	AO2	AO3	AO4
Marks	10	15	15	10

The question involves:

- study of the source for aspects of 'me-first' problems
- linking 'me-first' problems to developments in culture, science and society assessing how far 'individualism' can benefit society.

Recommended annotation

Intro for introduction

So1, So2... for social contributions

Sc1, Sc2... for scientific contributions

Cu1, Cu2... for cultural contributions

I+ for benefits of individualism

I- for reservations about individualism

Conc for conclusion.

Indicative content

Aspects of 'me-first' problems in the source include:

- family breakdown, education competition, rich/poor gap, unkindness, premature sexualisation, child unhappiness, emotional and behavioural problems in children, teenage pregnancy
- the source tends to concentrate on children and young people but the problems extend beyond those age ranges.

Cultural developments contributing to problems in 'me-first' society include:

- decline of religious belief and duty to others
- media coverage of former restricted topics
- school curriculum driven by targets and utilitarian goals
- can the individual make any difference?
- immigration and clashes of behaviour.

Scientific developments contributing to problems in 'me-first' society include:

- mobile phones, status and loss of privacy
- availability of morning after pill
- must have items eg ipods.

Social developments contributing to problems in 'me-first' society include:

- broken homes, living apart from one parent
- drive for status and success
- collapse of community spirit
- competition challenges teamwork
- political attitudes, need for entrepreneurs and risk takers
- visibility of wealth and its trappings
- threat of crime suggests personal protection
- vulnerability to threats caused by market forces.

How far can individualism be a benefit to society (There is a considerable literature on individualism on the internet, worth a visit)

Benefits include:

- creativity and innovation eg wealth creation
- variety of outcome eg in the Arts
- freedom but can come with responsibility to others
- actions can bring rewards
- independence and self reliance.

Problems include:

- vulnerability of less competent or interested
- people have different levels of need
- envy of the successful
- tensions with the goals of society
- dangers of anarchy.

<p>These descriptors are intended as a first guide to examiners. They indicate the characteristics of a top level answer. Marks within a level are awarded when an answer does not include all the parts or qualities shown in the descriptor. Answers which are 'borderline' should be awarded the lowest mark in the level.</p>		
Level 5	<ul style="list-style-type: none"> • these candidates will present very good accounts of how developments in culture, science and society have contributed to the problems of a 'me-first' society • their discussion of the extent of benefit of individualism to society will be very good eg a range of benefits and problems • there will be very good use of knowledge and personal experience • they will present an articulate, cogent and comprehensive answer. 	41-50
Level 4	<ul style="list-style-type: none"> • these candidates will present a good account of how developments in culture, science and society have contributed to the problems of a 'me-first' society • their discussion of the extent of benefit of individualism to society will be good eg benefits and problems • there will be good use of knowledge and personal experience • their response will be clear and coherent including all parts of the question. 	31-40
Level 3	<ul style="list-style-type: none"> • these candidates will present an adequate account of how developments in culture, science and society have contributed to the problems of a 'me-first' society • their discussion of the extent of the benefit of individualism to society will be adequate eg hints of benefits and problems • there will be some use of knowledge and personal experience • ideas will be communicated clearly. 	21-30
Level 2	<ul style="list-style-type: none"> • these candidates will present a limited account of how developments in culture, science and society have contributed to the problems of a 'me-first' society • their discussion of the extent of benefit of individualism to society will be limited • there will be limited use of knowledge and personal experience • their response will lack clarity with some errors of spelling and grammar. 	11-20

Level 1	<ul style="list-style-type: none">• these candidates will present a very limited account of how developments in culture, science and society have contributed to the problems of a 'me-first' society• their discussion of the extent of benefit of individualism to society will be very limited• there will be very limited fragments of the use of experience or exploration of definitions• their response will lack clarity with frequent errors of spelling or grammar.	0-10
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