

GCE

Edexcel GCE

The Contemporary World (6456)

Summer 2006

advancing learning, changing lives

Mark Scheme (Results)

# 6456: The Contemporary World

## Section A

Answers must be marked first according to the AO3 level descriptors, then the AO1, then the AO4, and finally AO2 to give a total mark of 25.

AO1: 6 marks

AO2: 3 marks

AO3: 10 marks

AO4: 6 marks

- 1 **Richard Feynman, the distinguished physicist and Nobel Prize winner, once said, "Science is the culture of doubt". Other people have said, "Religion is the culture of certainty".**

**How far do you think these contrasting descriptions of science and religion are justified? (22)**

This question requires some consideration of the meanings of "culture" in these contexts. A reasonable interpretation is ethos, framework of action or principles of behaviour in the area in question. The candidate might relate these to what they understand of the essential nature of science and religion. Seen this way the question is straightforward.

- Aspects of science that enter the answer might be:
- Science is based on inductive processes, as an outcome of which conclusions that may be justified are drawn, but they may not be valid/the truth.
- Scientific understanding develops through questioning, even challenging, established conclusions
- Science progresses through challenging nature
- Science (or rather some scientists) may give the impression that a scientific law is inviolate, but all laws are questionable. This contrasts with the laws of logic, and mathematical reasoning.
- Aspects of religion that enter the answer might be:
- Religion is based on beliefs that are not required to be rational or consistent, just believed strongly enough by some people
- Religious beliefs are usually derived by revelation, not by inductive or deductive reasoning

Candidates might argue from these premises to the conclusion that the descriptions are strongly justified.

However, other interpretations of "culture", such as groups sharing common beliefs, the hallmark of a society - or any other, might qualify the argument. Candidates could also develop arguments that question the possible co-existence of such cultures - are they not contradictory? This might be resolved by looking at the phenomena with which they deal.

The disciplines expected in AO1 are obviously science and religion. In order to reach levels 3 - 6, candidates might introduce social studies (if they develop an argument involving society's role in mediating different "cultures"; or other aspects of culture from Units 1 and 4. In other words anything that takes the candidate's answer beyond science and religion.

- 2 **"Progress is not an accident, but a necessity... it is part of nature."**

**How far do you think this is true of technology, art and politics? (22)**

Candidates will probably not recognise Spencer as a Victorian philosopher, and one of the founders of sociology. He enthusiastically embraced the ideas of Darwin, and applied them to human groups.

Answers should cover the meaning of "progress" in relation to the areas given.

Technology can be said to progress on the back of the development of scientific theories and explanations. Progress can be measured against certain criteria - cost, complexity, human needs met.

Art progresses in a less criterion referenced way - through creativity and innovation. One might consider art not progressing in a comparable way at all - what about the artistic merit in

prehistoric cave paintings and artefacts? The nature of art progresses in tandem with technology and political processes, reflecting the nature of society and the technology it uses.

Politics might be said never to progress at all, unless you speak in terms of spread of particular systems. Marxists may bring in the idea of historical inevitability, but this is arguably, not progress.

Ideas may include:

- Spread of democracy
- Fall of communism
- Concentration of political power on a global scale
- Reform of electoral process
- Impact of new technology

It is possible that some candidates want to consider progress in evolutionary terms - for example the increase in complexity of organisms over geological time, and the role that evolution has in this. This might be justifiable since the quote refers to progress being "part of nature".

Candidates should attain good levels for some kind of analysis of the meaning of "progress", an application of this to the three areas, consideration of arguments for and against the "necessity" of progress and a conclusion consistent with the evidence they have put forward. Very good essays might debate ideas of inevitability, and whether nature itself is defined by progression.

- 3 "The whole of modern medicine is an attempt to frustrate the course of nature. If we only did what was natural, we would abandon medicine entirely."  
How might this view of medicine affect the role of the health services and the ethical framework of society? (22)

This question is a different take on "nature" to that in question 2. This is important to note, since some candidates may do both questions, but should not be credited for big overlaps - they are not justified.

The answer needs to explain what is meant by the "course of nature". This might be a very Darwinian view of the living world - organisms are in highly dynamic situations, and every living thing is dependent on others for survival. Humans are beset by pathogens and predators, and, like other animals, have immune systems to protect themselves. In a sense we have a state of affairs in which humans are "naturally" attacked or eaten on the one hand, on the other we have "natural" mechanisms to resist or prevent such attacks. Medicine is the technology we have adopted to either strengthen our resistance before these things happen, or support our fight back. So in one sense, medicine could be said to be "unnatural", if you define "unnatural" as anything we, as humans do, as against "natural" which is anything else. Many scientists find that distinction highly arbitrary.

This sort of philosophical puzzle might engage some candidates - and all who answer the question at a high level must do so in part. The question asks about a National Health Service - and candidates can discuss the setting up of such a service as an "unnatural" event, but understandable from a human point of view. The **ethical framework** is something that should stretch candidates - and might lead to consideration of medical intervention and some religious beliefs (e.g. that disease is a test of faith). Another line might be the concept of animal rights, which if taken to a logical conclusion for all living things, might include the rights of bacteria to infect and possibly kill you. What price medicine then?

- 4 "So far as the mere imparting of information is concerned, no university has had any justification for existence since the popularisation of printing in the fifteenth century."  
Since modern ICT is so powerful and flexible, can this argument be extended to all education beyond the basic school level? Include consideration of technology, arts and society in your essay. (22)

This question should raise a discussion of the function(s) of education and in particular the role of higher education in society. The quote is intended to stimulate thought on the function of a university - why regard the imparting of information as "mere"? This should lead candidates into some discussion of this, and the role of universities in research, the advancement of learning and helping students to understand "real" learning as against the accumulation of knowledge.

The question itself ought to promote more thinking on the idea of the “universal” university. Should universities specialise in technological, artistic or political areas, since universities ought to promote breadth of learning and understanding? A specialist university might be a contradiction in terms. Candidates ought to be able to reflect on all three areas mentioned and come to a conclusion on whether specialisation is a good thing or not, or perhaps even tolerable considering the vast resources need in every modern area of thought. They could extend this into a consideration of primary and secondary education as well.

Candidates can also bring references to the way in which the Internet organises and enables retrieval of information, but that creative thinking and “true” learning are not just a matter of finding out facts.

Appropriate references to technology, arts and society/sociology are expected.

## Level Descriptors

### AO1 Knowledge and Skills

Level 1	Candidate demonstrates knowledge from only one discipline (area).	1 mark
Level 2	Candidate demonstrates some knowledge from two or more disciplines (areas).	2 marks
Level 3	Candidate demonstrates a broad range of knowledge from two or more disciplines (areas).	3 marks
Level 4	Candidate demonstrates knowledge and skills from two or more disciplines with a clear understanding and application of one.	4 marks
Level 5	Candidate demonstrates knowledge and skills from two or more disciplines with a clear understanding and application of two.	5 marks
Level 6	Candidate demonstrates comprehensive knowledge, skills and application of the relevant disciplines.	6 marks

### AO2 Communication

The answer is clear and lucid, (writing in correct form is taken as a matter of course) arguments are coherent and well laid out, where are very few grammatical or spelling errors.	3 marks (above average)
The answer is broadly understandable, writing is in the correct form, arguments are on the whole coherent, and grammar and spelling do not inhibit communication.	2 marks (average)
The answer is only understandable in parts, writing may be in an inappropriate form, arguments are not clearly expressed, and in places grammar and spelling inhibit communication.	1 mark (below average)
The answer is badly expressed or fails to treat the question too seriously, there may be serious lapses of grammar and spelling <b>OR</b> there is too little of the candidate’s own writing to assess reliably (as is sometimes the case in Section B).	0 marks (exceptionally poor)

NB The Quality of Written Communication marks are not dependant upon the AO3 mark.

## A03 Level Distributors and Mark Distributions

No marks are to be awarded for answers that are completely irrelevant or frivolous.

Level 1	<b>Partial, incomplete and inconclusive answers</b> Selects and marshals a limited range of evidence relevant to the question, but with no conclusion, implied or explicit.	1 mark
Level 2	<b>Limited, (mainly) one sided answer with a simple conclusion</b> Selects and marshals a limited range of evidence to draw a simple conclusion, which may or may not be appropriate. There may be little explanatory comment.	2-3 marks
Level 3	<b>A developed answer which largely examines one viewpoint or looks at two sides of the argument in a superficial and unspecific manner</b> Selects and interprets evidence, and uses it to draw a justified conclusion or conclusions. At the lower end, explanatory comment is simple and restricted. At the top end it is: either clearly interpreted and applied to a single view of the question or addresses different views in a superficial way with few specifics and little or no development.	4-6 marks
Level 4	<b>Evidence is used to examine contrasting viewpoints.</b> Selects, interprets and begins to evaluate evidence to show clear awareness of differing points of view, and uses it to draw a justified conclusion or conclusions. At the lower end, the range is limited and the evidence is evaluated in a simple way. At the top end, the range is wider and the evaluation is more developed.	7-9 marks
Level 5	<b>A balanced answer evaluating a wide range of evidence.</b> Selects, interprets and evaluates a wide range of information, concepts and opinions relevant to the question. Marshals and evaluates the evidence clearly and coherently to draw a justified, substantiated conclusion or conclusions.	10 marks

## A04 Understanding objectivity and subjectivity

Level 1	Uses examples of facts, opinions and belief in the evidence presented.	1-2 marks
Level 2	Makes explicit reference to facts, opinions and beliefs in some of the evidence presented.	3-4 marks
Level 3	Makes clear the difference between facts, opinions and belief in most of the evidence presented and shows how the use of fact, opinion and belief affects the strength of the argument(s) presented.	5-6 marks