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General Certificate of Education
January 2012

Religious Studies RSS04

Religion, Philosophy and Science

AS Unit D

Final

Mark Scheme

Mark schemes are prepared by the Principal Examiner and considered, together with the relevant questions, by a panel of subject teachers. This mark scheme includes any amendments made at the standardisation meeting attended by all examiners and is the scheme which was used by them in this examination. The standardisation meeting ensures that the mark scheme covers the students' responses to questions and that every examiner understands and applies it in the same correct way. As preparation for the standardisation meeting each examiner analyses a number of students' scripts: alternative answers not already covered by the mark scheme are discussed at the meeting and legislated for. If, after this meeting, examiners encounter unusual answers which have not been discussed at the meeting they are required to refer these to the Principal Examiner.

It must be stressed that a mark scheme is a working document, in many cases further developed and expanded on the basis of students' reactions to a particular paper. Assumptions about future mark schemes on the basis of one year's document should be avoided; whilst the guiding principles of assessment remain constant, details will change, depending on the content of a particular examination paper.

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Examination Levels of Response

Religious Studies (Advanced Subsidiary) AS Level Descriptors

Level	AS Descriptor AO1	Marks	AS Descriptor AO2	Marks	AS Descriptors for Quality of Written Communication in AO1 and AO2
7	A thorough treatment of the topic within the time available. Information is accurate and relevant, and good understanding is demonstrated through use of appropriate evidence / examples	**28-30**	A well-focused, reasoned response to the issues raised. Different views are clearly explained with supporting evidence and argument. There is some critical analysis. An appropriate evaluation is supported by reasoned argument.	**14-15**	Appropriate form and style of writing; clear and coherent organisation of information; appropriate and accurate use of specialist vocabulary; good legibility; high level of accuracy in spelling punctuation and grammar.
6	A fairly thorough treatment within the time available; information is mostly accurate and relevant. Understanding is demonstrated through the use of appropriate evidence / example(s)	**24-27**	A mostly relevant, reasoned response to the issues raised. Different views are explained with some supporting evidence and argument. There is some analysis. An evaluation is made which is consistent with some of the reasoning.	**12-13**	
5	A satisfactory treatment of the topic within the time available. Key ideas and facts are included, with some development, showing reasonable understanding through use of relevant evidence / example(s).	**20-23**	A partially successful attempt to sustain a reasoned argument. Some attempt at analysis or comment and recognition of more than one point of view. Ideas adequately explained.	**10-11**	Mainly appropriate form and style of writing; some of the information is organised clearly and coherently; there may be some appropriate and accurate use of specialist vocabulary; satisfactory legibility and level of accuracy in spelling, punctuation and grammar.
4	A generally satisfactory treatment of the topic within the time available. Key ideas and facts are included, showing some understanding and coherence.	**15-19**	A limited attempt to sustain an argument, which may be one-sided or show little ability to see more than one point of view. Most ideas are explained.	**7-9**	Form and style of writing appropriate in some respects; some clarity and coherence in organisation; there may be some appropriate and accurate use of specialist vocabulary; legibility and level of accuracy in spelling, punctuation and grammar adequate to convey meaning.
3	A summary of key points. Limited in depth or breadth. Answer may show limited understanding and limited relevance. Some coherence.	**10-14**	A basic attempt to justify a point of view relevant to the question. Some explanation of ideas and coherence.	**5-6**	
2	A superficial outline account, with little relevant material and slight signs of partial understanding, or an informed answer that misses the point of the question.	**5-9**	A superficial response to the question with some attempt at reasoning.	**3-4**	Little clarity and organisation; little appropriate and accurate use of specialist vocabulary; legibility and level of accuracy in spelling, punctuation and grammar barely adequate to make meaning clear.
1	Isolated elements of partly accurate information little related to the question.	**1-4**	A few basic points, with no supporting argument or justification.	**1-2**	
0	Nothing of relevance.	**0**	No attempt to engage with the question or nothing of relevance.	**0**	

RSS04: *Religion, Philosophy and Science*

Question 1 Miracles

0 1 **Outline scientific arguments against miracles and explain religious responses to those arguments.**

Science uses experiment and evidence to explain phenomena in the universe whereas religion relies on tradition and holy texts. Miracles purport to be a break in the laws of science by a metaphysical being. Evidence for such a being in scientific terms is at best thin on the ground and at worst non-existent. Science makes a naturalistic explanation for unusual phenomena more likely than a metaphysical explanation. Scientific method is a proven and successful method for the examination of processes in the universe.

Religious responses may include reference to unexplained miraculous events such as those at Lourdes; the significance of miracles is not always necessarily about the way they breach scientific laws but in the significance that the events carry for religious believers; God's intervention in the laws of nature is perfectly rational given that he is an omnipotent and loving being who would respond to the needs of his creation.

Max L4 if either science or religion not covered.

(30 marks) **AO1**

0 2 **'Miracles do not make it reasonable to believe in God.'**

Assess this claim.

Do not make it reasonable

Science provides explanations for events which in the past had seemed to be miraculous so it is more likely that these events are natural. Students may use Hume to argue that there is never enough evidence on which to base belief. They may choose to use religious arguments against the notion of a God who only intervenes occasionally.

Do make it reasonable

Miracles tell us about God as a theistic being. If the belief in such a being is reasonable then miracles are a reasonable basis for belief in God. Many miracles appear to defy modern day analysis so an explanation from these events to the existence of God is reasonable.

(15 marks) **AO2**

Question 2 Creation

0 3 Explain both creationism and the theory of intelligent design.

Students will refer to various forms of Creationism: Young Earth Creationism and Old Earth Creationism with variations of both including progressive creationism and gap creationism. All forms start with the inerrancy of sacred texts. Expect a variety for the better answers.

ID put forward as a development of creationism and focuses on the irreducible complexity of biological organisms. Such a feature points to the handiwork of a non-natural creating being and appears to defy the explanations of evolution. Students will probably refer to the work of Behe and others.

Max L5 if only one element covered.

(30 marks) **AO1**

0 4 'The theory of intelligent design is essentially a religious rather than a scientific theory.' Assess this view.

Is religious

God is at the centre of the theory and it has been developed in response to what is perceived to be an increasing acceptance that evolution rules out the existence of a Creator. ID helps to plug the gaps in evolutionary theory by suggesting that God works through nature.

The evidence for ID is suspect. Many alternative views for irreducible complexity, for example, can be suggested. The theory does not submit to the usual scientific processes of experimentation and prediction. ID essentially looks to the past for its truth – this is always going to be unverifiable – whereas most science anticipates the future.

Is scientific

Uses science to establish that component parts of organisms are complex; accepts evolutionary theory up to a point; Behe uses cell biology to underline the wonder of complexity; supporters of ID use mathematical probability to argue that the emergence of complexity naturalistically is fantastically small.

(15 marks) **AO2**

Question 3 The design argument

0 5 Explain any two versions of the design argument.

Students are entitled to use any design argument but will probably use those put forward by Aquinas, Paley and Swinburne.

A non-exhaustive list of points may include:

The apparent purpose of things in nature;
The designed appearance of objects in the universe;
The happy coincidence of natural forces which make life possible;
The universal nature of temporal and spatial laws;
The fine tuning evident in the universe.

Max L5 if only one.

(30 marks) **AO1**

0	6

'The weaknesses of the design argument far outweigh the strengths.' How far do you agree?

Do outweigh

Students may refer to many things: evil; poor or pointless design, the lack of evidence for a theistic god; the unsatisfactory nature of analogies; scientific advances – especially Darwinism; etc.

Do not outweigh

The older forms of the argument from Paley and Aquinas have been undermined by science and philosophy but modern versions still flourish. It is unexplained by science or philosophy why spatial and temporal laws are as they are and why the universe is so finely tuned so as to bring about the emergence of intelligent life. A theistic explanation seems at the very least to be a rational one.

(15 marks) **AO2**

Question 4 Quantum mechanics and a religious world view

0	7

Explain the significance for religion of two key ideas from the world of quantum mechanics.

Answer will depend on ideas chosen.

Expect the elements from the specification:

- Quanta: energy can come in the form of little 'packets' rather than just in waves and this discovery changed the way scientists viewed the behaviour of matter in the universe;
- the behaviour of the electron: the way that the electron is viewed is intimately linked with the way it is measured and certain experiments will determine how the electron behaves;
- wave-particle duality of light: light can be seen to have a dual nature: wave-like and particulate which challenges how scientists understand the nature of the universe and their role in observing it.
- the role of the observer: the scientist can no longer stand apart from the process of the experiment but must accept that his involvement will shape the outcome of the experiment itself.

Some students may include discussion of Heisenburg and Schrödinger.

Significance for religion may include consideration of the changing and contingent nature of human knowledge and the way in which quantum mechanics makes the scientist part of the story of science rather than an impartial observer. The paradoxical nature of aspects of quantum mechanics reflects the many paradoxes present in religious belief. Scientific language about quantum mechanics is largely symbolic and this, in turn, also ties in with the symbolic nature of religious discourse.

Max L5 if only one idea is considered.

(30 marks) **AO1**

0	8

Assess the view that science and religion have nothing in common.

Nothing in common

Religion deals with metaphysical truths whereas science deals with empirical truth. The methods used by both to arrive at truth are wholly different. Science depends on experiment and expects repeatability whereas religion refers to tradition and ancient texts.

Have something in common

Both are essentially human ways of telling the story of reality. Both forms of knowledge are contingent. In both spheres, humans have needed courage to advance their knowledge and have used faith to reach the truth. Neither science nor religion need exclude each other from a full picture of reality.

(15 marks) **AO2**

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