



General Certificate of Education

Religious Studies 1061

RSS04 Religion, Philosophy and Science

Mark Scheme

2009 examination - January series

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 candidates' 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 candidates' 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.

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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	
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	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.
0	Nothing of relevance.	0	No attempt to engage with the question or nothing of relevance.	0	

RSS04: Religion, Philosophy and Science**1 (a) Explain the arguments of David Hume against miracles.**

Candidates may start with Hume's definition that a miracle is a violation of the laws of nature and then go on to the argument that, since laws of nature are descriptions about how things are, nothing could ever be classified as a violation.

Hume's primary argument on testimony: given what we know about the way the world works, it is unlikely that we would ever accept that miracles happen. Only if refusing to accept that miracles happen ends up being more miraculous would we accept the likelihood of a miracle being real.

Hume's secondary arguments on miracles.

N.B. The question argues for arguments in the plural.

For Levels 6-7, breadth and depth needed.

(30 marks) AO1

(b) Assess the view that miracles undermine religious belief in God.**Miracles do undermine**

May refer to the capricious aspect of miracles, i.e. why does God act sometimes or rarely, or why does he appear to act for some people in less desperate need than on the big occasions where a miracle is really necessary?

May also refer to the issue of free will – if God intervenes in nature, does this restrict or remove humans from freely choosing to believe or love him?

May also argue that since God created the universe it does not make sense for him to keep on intervening to put things right.

Miracles do not undermine

Miracles show God cares and that he remains interested in his creation.

May argue that the number of miracles is rare precisely because God wishes us to have freedom to grow spiritually.

May use the idea of John's Gospel that miracles are God's way of revealing something of significance about himself to his creation.

(15 marks) AO2

2 (a) Explain scientific theories about the nature and origin of the universe.

Origin

Expect an outline account of the **Big Bang theory** which may include some or all of the following:

- Universe begins at a moment in space-time 15 billion or so years ago.
- It is observable that the universe continues to expand.
- Increasing amounts of scientific evidence for this beginning, e.g. red shift and background radiation found by Hubble and Penzias and Wilson.
- Big Bang theory explains the way the universe looks today.

Nature

Expect an outline of the endless expansion idea and / or **Big Crunch theory** which may include:

- Big Crunch is the idea that the universe will eventually stop expanding and the gravity will slowly reverse the expansion until everything is crushed together.
- Endless expansion idea is that the universe will not stop expanding and that eventually the universe will 'tire itself out' and reach a state of total thermal equilibrium.

N.B. The specification states that candidates are NOT required to have detailed knowledge of the science.

Maximum Level 5 (21 marks) if only origin or nature covered.

(30 marks) AO1

(b) To what extent do scientific theories about the nature and origin of the universe conflict with religious beliefs about creation?

Expect some detail on what would constitute religious beliefs. This may cover, for example, biblical material in Genesis, wider Christian thinking found in creationist thought or philosophical contributions to the *creatio ex nihilo* and *creatio continua* notions.

The extent to which they do

- Could argue from creationist view that Big Bang theory contradicts the Scriptures.
- Could argue that Big Bang theory does not leave a space for God.
- Could argue that theories about the Big Crunch and endless expansion go against the idea of a God who loves his creation or against the idea that the God is involved with the end of the universe.

The extent to which they do not

- Did God begin the Big Bang? Nothing in science tells that this is impossible.
- Religious traditions do not all think scriptural accounts of creation are literally true but rather that they represent a story of creation. In this context, therefore, science and religion are not in conflict.
- Big Crunch and endless expansion reinforce the idea the universe is a created thing separate from God.

(15 marks) AO2

3 (a) Explain the main features of the design argument for the existence of God.

Candidates may use any design argument. Expect Paley and Aquinas but they can refer to Swinburne or the Anthropic argument or any other design argument which answers the question.

Some may use the idea of intelligent design.

Candidates must show how the main features of the design argument prove the existence of God.

(30 marks) AO1

(b) 'Science makes the design argument irrelevant.'

Assess this claim.

Expect discussion of Dawkins type debate.

Is irrelevant

- No evidence to support notion of purposeful design.
- Many things in the way the world works which appear to contradict the nature of God, i.e. evolutionary change can be random and leads to discarding of members of a species and, sometimes, whole species.
- Evolutionary thinking eliminates the thrust of Genesis and the creation of man at a single point in history.
- Also undermines the specialness of humans by arguing for evolution from other primates.

Is not irrelevant

- Science cannot explain the framework of how life is.
- Swinburne's idea about the regularities of co-presence and succession to explain the extraordinariness of the laws which affect space and time – these need explanation which science, because it pre-supposes them, cannot provide. Candidates may make use of the kidnapper analogy to raise the argument that the universe is a truly remarkable place.

(15 marks) AO2

4 (a) Explain how the development of quantum mechanics has changed the way some scientists view reality.

Definition of developments may include:

- Understanding of quanta – packets of energy at the subatomic level changing the idea that the atom was the smallest bit of reality.
- Experiments with light (Einstein and Young) demonstrating that light seems constructed of two mutually exclusive elements: waves and particles. Changes the idea that there is one absolute and definitive way to look at reality.
- Application of this dualistic understanding of light to electrons through the use of the double-slit experiment.
- Uncertainty in the quantum realm changes the role of the scientist from merely being a spectator of the science to be an actor on the stage.
- Overall awareness that quantum mechanics raises the question of what counts as a true understanding of reality.

N.B. Candidates must not simply define these developments but must link them to the change in scientific thinking.

Maximum Level 4 for a simple list defining development.

(30 marks) AO1

(b) ‘The science of quantum mechanics makes religious belief more credible.’

Assess this view.

Candidates can interpret religious belief in any, valid way. A wide degree of acceptance of what they write should be given.

More credible

- Quantum mechanics tells us that science is a human story about the world. Religious traditions can also be seen as such.
- Quantum mechanics reveals a more mysterious world, a world which is difficult to describe. Mystical traditions also refer to the ineffability of religious experiences.
- Quantum mechanics brings a unity to reality. Reflected in religious traditions (mystical) such as Buddhism.

Not more credible

Attempts to use quantum mechanics to develop a religious sense are ill-founded: both are talking with different languages and the methodology of both is entirely different.

Despite the difficulty in understanding or explaining quantum mechanics, it does not follow that this is equivalent to religious beliefs about an incomprehensible or difficult to describe religious reality.

(15 marks) AO2