

Religion and Science

SCIENTIFIC THEORIES ABOUT THE ORIGINS OF THE WORLD AND HUMANITY

Key ideas: Cosmology is about the origins of the universe which most scientists believe is caused by the Big Bang. Evolution concerns the development of life on earth which most scientists believe came about through a process of natural selection.

- The Big Bang theory suggests that around 18 billion years ago, matter in the universe became so compressed that it formed a huge explosion scattering matter which flew away and joined other matter, eventually creating the solar system.
- Charles Darwin (1809-82) is generally considered to be the founder of evolutionary theory and suggested that life began with a single cell and evolved and developed through a process of natural selection which over a long time while species change, the strongest animals and plants survive while the weakest eventually die out. This theory is developed in his 1859 book, 'On the Origin of Species'.
- Many religious believers were unhappy with Darwin's findings because it disagreed with the Bible.
- The scientist and Christian Phillip Gosse (1810-88) argued that fossils had been put in the ground by God to test the faith of Christians.
- Intelligent design is an alternative theory which claims that the universe and all life forms are too complex to have evolved without God. Although there is no scientific proof to support this, it is an accepted theory by some, just as evolution is an accepted theory by others.

Quotation

"In the struggle for survival, the fittest win out at the expense of their rivals because they succeed in adapting themselves best to their environment." Charles Darwin

CHRISTIAN TEACHINGS ABOUT THE ORIGINS OF THE WORLD AND HUMANITY

Key Idea: There are two different creation accounts in the book of Genesis.

- The first account of creation in the Bible says that God created the heavens and the earth out of nothing – *ex nihilo*. Some Christians however, believe that God created the world out of matter that was already present.
- These two different ideas pose questions about the existence of evil. If God created the world *ex nihilo* and God is all good, then anything he creates must also be good. However if God created the world from matter that already existed and evil was present, that would mean that God had no responsibility over the existence of evil.
- In this creation account God creates the world in six days with both humans and animals being created on the sixth day. Humans are made in the image of God and are given the responsibility for looking after the whole of creation and are placed in control of it.

- Nothing in this creation account happens by chance and everything God makes has a purpose or reason for being.
- In the second creation account, humans are made before the plants and animals.

Quotations

“In the beginning God created the heavens and the earth.” Genesis 1:1

“Be fruitful and increase in number; fill the earth and subdue it. Rule over the fish in the sea and the birds in the sky and over every living creature that moves on the ground.” Genesis 1:28

THE RELATIONSHIP BETWEEN SCIENTIFIC AND RELIGIOUS UNDERSTANDINGS OF THE ORIGINS OF THE WORLD AND HUMANITY

Key Idea: Most Christians accept the Big Bang theory and believe that God was present and may have caused it.

- Christians who believe that everything in the Bible is literally true would have a problem with scientific theories as there is no mention in the Bible of the Big Bang or evolution over billions of years, therefore they believe that science must be mistaken.
- Many Christians believe that the creation accounts are myths which contain important truths that God was ultimately responsible for the creation of the world and humanity but the creation accounts are represented in a more symbolic way.
- Many Christians believe that scientific and religious understandings can both be right and that science explains *how* the world came into being whereas religion explains *why* (giving purpose to life).
- Days spoken of in the Genesis account might be recognised as simply periods of time where developments occurred in line with the evolutionary process.
- Darwin’s theory has been problematic for many Christians and was not fully accepted by the Roman Catholic Church until 1996.

Quotation

“Science asks how things have happened, religion asks why. Genesis is not there to give short, technical answers about how the universe began. It gives us the big answer that things exist because of God’s will. One can perfectly well believe in the Big Bang, but believe in it as well as the will of God the Creator.” John Polkinghorne (a Christian Scientist).

THE PLACE OF HUMANITY IN RELATION TO ANIMALS

Key Idea: Most Christians believe that animals are part of God’s creation but that they were created for the use of humans and are therefore lesser beings than humans.

- In creation accounts of Genesis, humans are made in the image of God and are given the responsibility for looking after the whole of creation and are placed in *control* of it.
- God gave humans free will so they can choose how to treat the world including animals.
- Christians believe that God breathed life into Adam and therefore gave humans something special; a soul. God did not breathe life into animals; therefore they have no soul.
- Christians believe that human life is special and unique and that God loved humanity so much that he was willing to allow his son to die in order to restore a relationship with human beings.

- Jesus showed through his teachings that God cares about animals and that they will not be forgotten by God.
- St. Francis of Assisi (1181-1226) was a Christian saint who appeared to believe that animals had souls and he spoke about animals and their treatment. In 1990, Pope John Paul II issued a proclamation declaring that animals have souls.
- There is some disagreement about the Christian attitude towards animals and their treatment, especially in regard to animal testing as some believe that humans were given power over animals which make testing acceptable. Others feel that they should be treated with the same respect and care as humans.
- Both the Church of England and the Roman Catholic Church recognize the need for animal testing in order to save human lives; however they agree that suffering needs to be kept to a minimum.
- Christian churches such as the Church of England, the Methodist Church and the Quakers (Religious Society of Friends) have all spoken out against the way that animals are treated.

Quotations

“So the man gave names to all the livestock, the birds in the sky and all the wild animals.” Genesis 2:20

“Are not five sparrows sold for two pennies? Yet not one of them is forgotten by God.” Luke 12:6

“If you have men who will exclude any of God's creatures from the shelter of compassion and pity, you will have men who will deal likewise with their fellow men.” St. Francis of Assisi

“Developments in science, medicine and technology **should be monitored** in the light of Christian ethical principles.” Church of England

“The universe as a whole is a product of God's creative and imaginative will. Men and women are to be stewards and curators not exploiters of its resources, material, animal and spiritual.” Methodist Church

CONCEPT OF STEWARDSHIP AND RELIGIOUS TEACHINGS RELATING TO ENVIRONMENTAL ISSUES

Key Ideas: The Bible teaches that the all life is created by God and therefore sacred. Humans were given the special job of being stewards of the earth in order to care for God's creation.

- Christians believe that the earth and all that is on it belongs to God, but he gave humans the intended role of stewards of the earth. This means that humans act as caretakers for both the earth and its inhabitants. God gave humans dominion over creation and not domination, so humans should not exploit it, they should preserve it for future generations.
- In the book of Genesis, the story of Noah shows how humans should care for the environment. Noah kept two of each animal on the ark to save them from the flood. When the floods went down and they could go back on to land, the animals would be able to reproduce and rebuild the population.
- Christianity teaches that everything is interdependent, so driving a species to extinction, or harming the planet ends up harming us. We depend on the earth and its resources to survive just as much as the earth depends on us to take care of it responsibly to survive.

- Christianity teaches that people should only take from the world what they need and not be concerned with material wealth.
- In addition to expressing his concern for animals, St. Francis of Assisi also showed his respect for the world.

Quotations

“The earth is the Lord’s, and everything in it, the world, and all who live in it; for he founded it on the seas and established it on the waters.” Psalm 24:1-2

“The Lord God took the man and put him in the Garden of Eden to work it and take care of it.”
Genesis 2:15

“Be praised, my Lord, through our sister Mother Earth, who feeds us and rules us, and produces various fruits with coloured flowers and herbs.” St Francis of Assisi (from his poem ‘Canticle of the Sun’)

CHRISTIAN RESPONSES TO ENVIRONMENTAL ISSUES

Key Idea: Humanity has been given stewardship and dominion over the world, not the right to dominate and abuse it.

- In 1988, the Pope clearly stated how Roman Catholics should behave in relation to the earth; that the earth and all life are gifts from God which should be treated with respect.
- Christians show their care and thankfulness for the environment through worship. The Harvest Thanksgiving is one Christian festival that promotes care for others.
- The World Council of Churches made a statement stressing the need for Christians to demonstrate concern for the state of the environment and remember their duty as stewards.
- Christians might act as good stewards by recycling, buying fair-trade products, or using efficient eco friendly sources of energy such as solar panels to generate electricity.
- Although they are not Christian organisations, Christians may choose to join popular conservation groups or environmental campaigns such as Greenpeace or Friends of the Earth as they reflect the Christian ideals of caring for the environment or acting as good stewards.
- Other charities and organisations that are based on Christian beliefs include *A Rocha*, *The European Christian Environmental Network* and *Operation Noah*.
- CAFOD (Roman Catholic) and Christian Aid (Protestant and Orthodox Churches) also undertake conservation work to help people in the developing world to be self-sufficient. They also put pressure on governments and industry to think more about how we are abusing the planet.

Quotations

“We have a responsibility to create a balanced policy between consumption and conservation.” “The earth and all life on it is a gift from God given to us to share and develop, not to dominate and exploit... we must consider the welfare of future generations in our planning and utilisation of the earth’s resources” Pope John Paul II, 1988.

“The dignity of nature as creation needs to be bound up with our responsibility for the preservation of life.” World Council of Churches

“Care of water resources and attention to climate change are matters of grave importance for the entire human family.” Pope Benedict XVI, 2007.

Religion and Science – Key Words

Key word	Definition
Big Bang theory	The scientific theory which suggests that around 18 billion years ago a massive explosion led to the creation of the universe.
Cosmology	Theories about the origins of the universe.
Creationists	People who believe that God created the world in six days as in the biblical accounts.
Domination	To exercise power over a less-powerful being.
Dominion	To have power or authority over something.
Evolution	The process by which human and plant life have developed or evolved over a long time and adapt to the environment.
<i>Ex nihilo</i>	To come out of nothing.
Intelligent design	The theory which says that life is so complex that it must have been designed by a higher intelligent being, and did not evolve by natural selection.
Myth	A story which attempts to explain the origins of natural phenomena or aspects of human behavior.
Natural Selection	Is the name Charles Darwin gave to the process by which over a long time while species change, the strongest animals and plants survive while the weakest eventually die out.
Soul	The part of a human being that is separate from the physical body.
Steward	Someone who takes responsibility for the care of something for someone else. In Christian terms, this means taking care of God’s creation.

Religion and Science – Practice Exam Questions

Question 1

- a) What is meant by ‘the origins of humanity’? (1 mark)
- b) State two uses of animals that Christians might find unacceptable. (2 marks)
- c) Give three reasons why some Christians believe we should care for our environment. (3 marks)
- d) Explain what Christians believe about how the world began. (6 marks)
- e) “Scientific theories and Christian teachings have nothing in common.” (12 marks) Discuss this statement. You should include different supported points of view and a personal viewpoint. You must refer to Christianity in your answer.

Question 2

- a) What is meant by the term Big Bang? (1 mark)
- b) How does science believe humans began? (2 marks)
- c) Why do some Christians believe that animals are different to human beings? (3 marks)
- d) Explain why Christians believe it is important to look after the environment. (6 marks)
- e) “The world is not ours to destroy.” (12 marks) Discuss this statement. You should include different supported points of view and a personal viewpoint. You must refer to Christianity in your answer.

Question 3

- a) How many creation stories are there in the book of Genesis? (1 mark)
- b) What is meant by stewardship? (2 marks)
- c) Give three examples of environmental issues which might concern Christians. (3 marks)
- d) Explain why some Christians might find it difficult to accept the story of creation. (6 marks)
- e) “Religious people have a special duty to care for the environment.” (12 marks) Discuss this statement. You should include different supported points of view and a personal viewpoint. You must refer to Christianity in your answer.

HOW TO WRITE A PART 'E' EVALUATION QUESTION



1

I agree/ disagree with this statement

because....



2

On one hand, some Christians think

because....

Evidence from the bible says

This is important because it shows

3



On the other hand, some Christians think

because....

They may say that evidence can be found

4

There could be problems with this argument

because....



5

Other people/denominations/religions/ atheists may think



6



MATT GROENING



because....

Having considered all sides of the argument which are



My gut feeling is

(and/or)

7

My final conclusion is

because....

Part D – Self Assessment

<p>Level 1</p> <p>1-2 marks out of 6</p>	<p>A weak answer</p> <p><input type="checkbox"/> I have given a simple answer with a small amount of relevant information.</p> <p><input type="checkbox"/> I have listed some answers but with little description, explanation or analysis.</p> <p><input type="checkbox"/> I have made quite a few mistakes in spelling, grammar and punctuation.</p>
<p>Level 2</p> <p>3-4 marks out of 6</p>	<p>A satisfactory answer</p> <p><input type="checkbox"/> I have given some relevant information without detail.</p> <p><input type="checkbox"/> I have given some description, explanation or analysis to support my answer.</p> <p><input type="checkbox"/> I have presented my answer with some organisation.</p> <p><input type="checkbox"/> I have referred to Christian teachings in my answer.</p> <p><input type="checkbox"/> I have used some specialist religious or philosophical words, and used some of them correctly.</p> <p><input type="checkbox"/> I have a few mistakes in spelling, grammar and punctuation.</p>
<p>Level 3</p> <p>7-9 marks out of 6</p>	<p>A good answer</p> <p><input type="checkbox"/> I have selected relevant information and developed it properly.</p> <p><input type="checkbox"/> I have given a fairly complete and full description, explanation or analysis to support my answer.</p> <p><input type="checkbox"/> I have presented my answer properly in a well structured format.</p> <p><input type="checkbox"/> I have referred to Christianity and have given a full explanation of why the teaching(s) selected is/are important.</p> <p><input type="checkbox"/> I have regularly used specialist religious or philosophical words, and used them correctly.</p> <p><input type="checkbox"/> I have made a few mistakes in spelling, grammar and punctuation.</p>

Part E – Self Assessment

Essay topic/title:	
Level 1 1-3 marks out of 12	A weak answer <input type="checkbox"/> I have given a simple answer without relevant information. <input type="checkbox"/> I have given an opinion that is inappropriate or without evidence. <input type="checkbox"/> I have made quite a few mistakes in spelling, grammar and punctuation.
Level 2 4-6 marks out of 12	A limited answer <input type="checkbox"/> I have given some relevant information without detail. <input type="checkbox"/> I have put forward my opinion with a little bit of explanation. <input type="checkbox"/> I have stated at least one viewpoint with some limited argument or discussion. <input type="checkbox"/> I have thought a bit about the best way to organise my answer. <input type="checkbox"/> I have vaguely referred to Christianity in my answer. <input type="checkbox"/> I have used some specialist religious or philosophical words, and used some of them correctly. <input type="checkbox"/> I have a few mistakes in spelling, grammar and punctuation.
Level 3 7-9 marks out of 12	A competent answer <input type="checkbox"/> I have selected relevant information and developed it properly. <input type="checkbox"/> I have given my own point of view in an appropriate way. <input type="checkbox"/> I have discussed more than one different viewpoint and explained their importance. <input type="checkbox"/> I have given reasons/evidence to back up the points of view that I mention. <input type="checkbox"/> I have structured my answer properly. <input type="checkbox"/> I have referred to Christian teachings and explained their relevance and importance. <input type="checkbox"/> I have used specialist religious or philosophical words, and used most of them correctly. <input type="checkbox"/> I have made occasional mistakes in spelling, grammar and punctuation.
Level 4 10-12 marks out of 12	A good answer <input type="checkbox"/> I have shown that I understand the significance of the issue raised. <input type="checkbox"/> I have given my own, appropriate, point of view, and properly backed it up with reasons. <input type="checkbox"/> I have discussed and analysed several different points of view in detail. <input type="checkbox"/> I have explained the relevant reasons/evidence supporting each point of view. <input type="checkbox"/> I have justified my evaluation of the issue. <input type="checkbox"/> I have presented my answer in a clear and organised way. <input type="checkbox"/> I have referred to specific Christian teachings and analysed and explained their relevance and importance. <input type="checkbox"/> I have correctly used specialist religious or philosophical words. <input type="checkbox"/> I have made hardly any mistakes in spelling, grammar and punctuation.

