



Religion Studies

××× RELIGION AND SCIENCE
×× SELF STUDY GUIDE
× BOOK 4



basic education
Department
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REPUBLIC OF SOUTH AFRICA



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1. Introduction

The declaration of COVID-19 as a global pandemic by the World Health Organisation in 2020, led to the disruption of effective teaching and learning in all schools across South Africa.

Many learners, across all grades, spent less time in class due to the phased-in reopening of schools, as well as rotational attendance and alternative timetables that were implemented across provinces, to comply with social distancing rules. This led to severe teaching and learning time losses. Consequently, the majority of schools were not able to complete all the relevant content prescribed in Grade 10-12 in accordance with the Curriculum and Assessment Policy Statement.

In order to mitigate and intervene against the negative impact of COVID-19, as part of the Recovery Learning Plan for Grades 10-12, the Department of Basic Education (DBE) worked in collaboration with Subject Specialists from various Provincial Education Departments (PEDs) to develop this Self-Study Guide for learners in Grade 12.

The content in this study guide is critical towards laying a strong foundation to improve your performance in this subject.

The main aims of this study guide is to:

- Assist learners to improve their performance, by revising and consolidating their understanding of the topic;
- Close existing content gaps in this topic; and
- Improve and strengthen understanding of the content prescribed for this topic.

This study-guide is meant as a self-study guide for learners and therefore should be used as a revision resource to consolidate learning at the end of a particular topic taught in class.

Learners are encouraged to complete the exercises and activities to test their understanding and to expose themselves to high quality assessment.

This study guide can also be used by study groups and peer learning groups, to prepare for the final NSC examination in this subject.

2. How to use this Self-study Guide?

This study guide covers 9 of the topics that pose the most challenges in the examinations. Please also note the remaining topics that are set out in the CAPS. This Self-Study Guide includes the following topics:

- History and present dynamics of inter-religious relationships in South African, African and international communities
- Religion in areas of recent conflict in South Africa, Africa, and the world
- Analysis of secular worldviews with reference to the definition of religion and universal dimensions of religion: atheism, agnosticism, humanism, and materialism
- Religion and the natural sciences
- Religious freedom, human rights, and responsibilities
- Normative Sources
- Internal Differentiation
- Central Teachings
- Social Issues

This is a Self-Study Guide that is designed to explain the concepts and content that is examinable in Religion Studies Paper 1 and Paper 2. It also provides explanations of the common action/command verbs used in the Question Papers and how to use these to analyse and understand what you are required to do to respond to a question. It also provides quick tips on how to approach specific content in an exam situation in order to save time.

The booklets have been designed to provide simplified notes and a variety of questions sourced from various past question papers. Instead of providing responses for all questions, the Self Study Guides assist with the analysis and interpretation of questions. This is to ensure that learners focus on studying the content instead of the questions. Learners are also reminded that the same content may be tested in different ways. Therefore, it is important to understand the command verbs and to have both conceptual and content knowledge.

A second package of the Self Study Guide labelled the Revision Package focuses on subject specific key concepts as examined over a period of 6 years and sourced from past Question Papers. There are 12 sets of questions/activities and Marking Guidelines provided to guide you and assist with revision and exam preparation. You are expected to answer these questions without looking at the responses. You may do a self-assessment after you have completed answering the questions.

Additional to this Self Study Guide learners are expected to:

- (a) Know current affairs or topical issues in the media that are relevant to Religion Studies
- (b) Use of past NSC papers – (Thutong and past papers on your internet search engine)
- (c) Use the 2021 Examination Guidelines (Thutong – Religion Studies Exam Guideline)
- (d) Use various textbooks, newspapers and other sources such as internet

Lastly, Religion Studies is designed to test critical thinking, application of knowledge and provision of advice or solutions from a religious perspective. Therefore, a good grounding in the prescribed knowledge, skills and values in Religion Studies is essential.

3. TOPIC: RELIGION AND NATURAL SCIENCE

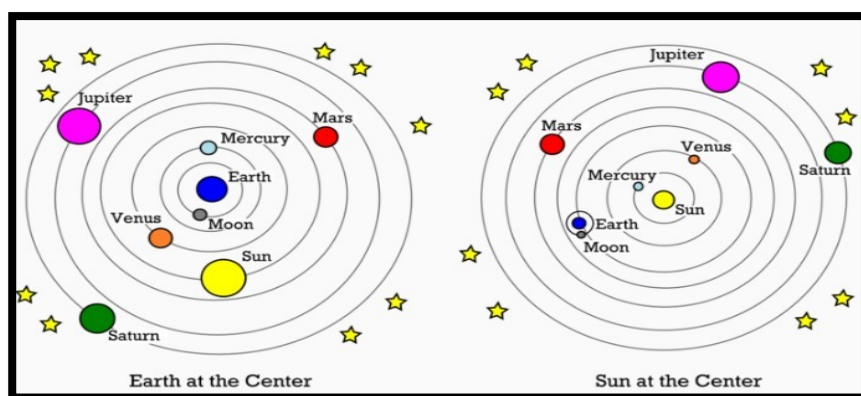
3.1 Background

In this Chapter we will look at the relationship between Religion and Science. It is important to note that for centuries religion and science coexisted to create meaning for people. In this regard ancient people depended on the stars and the moon as reliable indicators of the seasons or the celebrations of various religious festivals.

By the 16th century the growth in scientific knowledge expanded and began to pose challenges to the age old geocentric theory that was held by religion. The geocentric theory placed earth as the centre of the universe and tied in with the Christian belief that God had put man at the centre of His creation. Four scientists, namely Nikolas Koppernigk (Copernicus from Poland), Tycho Brahe (Denmark), Galileo Galilei (Italy) and Johannes Kepler (Germany) challenged the geocentric and Christian view of creation. Copernicus is the astronomer who initiated the process of developing an alternative theory known as the heliocentric theory of the solar system.

The heliocentric theory provided insights into the shape and the movement of planet earth. The explanations provided by the scientists challenged entrenched religious beliefs. Church leaders such as Martin Luther argued that by taking earth from the centre of things the scientists were removing man from the centre of creation. This caused a rift between the church and the scientists.

We will therefore investigate/examine the relationship between Religion and Science by providing concepts that are related to this topic, the scientific account of creation (Big Bang Theory) and the religious explanation of how the world came into being. This will be followed by Darwin's Theory of Evolution as well as the religious explanations of how man came into being. We will also look at the relationship between religion and science from a modern day perspective.



Geocentric Theory

Heliocentric Theory

3.2 Key Concepts

	CONCEPT	EXPLANATION
1.	Big Bang Theory	It is the cosmological model explaining the existence of the universe.
2.	Cosmology	The science of origin(start) and development of the universe.
3.	Creation	The creating of the universe.
4.	Darwinism	Darwinism is a theory of biological evolution developed by the English naturalist Charles Darwin and others, stating that all species of organisms arise and develop through the natural selection of small, inherited variations that increase the individual's ability to compete, survive, and reproduce.
5.	Evolution	The process by which different kinds of living organism are believed to have developed from earlier forms during the history of the earth.
6.	Abrahamic Religions	The Abrahamic religions are a group of monotheistic religions that strictly endorse worship of the God of Abraham. These most notably include Judaism, Christianity and Islam.
7.	Myth	A myth is a traditional story, especially one concerning the early history of a people or explaining a natural or social phenomenon, and typically involving supernatural beings or events.
8.	Natural selection	Natural selection is the process in nature by which organisms better adapted to their environment tend to survive and reproduce more than those less adapted to their environment.
9.	Galaxies	a system of millions or billions of stars, together with gas and dust, held together by gravity.
10.	Universe	all existing matter and space considered as a whole. This is also known as the cosmos.
11.	Constellations	a group of stars forming a recognizable pattern that is traditionally named after its apparent form or identified with a mythological figure.
12.	Eastern Religions	<p>The Eastern religions are the religions that originated in East, South and Southeast Asia and are different from Western religions.</p> <ul style="list-style-type: none"> • This includes the East Asian religions (Shintoism, Taoism and Confucianism) • Indian religions (Hinduism, Buddhism, Sikhism and Jainism)
13.	Scientific Theory	a coherent group of propositions formulated to explain a group of facts or phenomena in the natural world and repeatedly confirmed through experiment or observation
14.	Heliocentric Theory	The heliocentric theory argues that the sun is the central body of the solar system and perhaps of the universe.
15.	Geocentric Theory	The geocentric theory (in Greek, ge means “ earth ”), argues that Earth was the center of the universe.
16.	Intelligent Design	Intelligent design (ID) is a scientific theory that acknowledges the existence of God in the creation of the universe.

3.3 Religious and Scientific Accounts of Creation



Source: religious account of creation images - Bing images

Religions and science provide differing views of how the universe came into being. The sciences find it difficult to understand some of the religious accounts of how creation came being. Religion also finds it difficult to reconcile the scientific accounts of creation with religious beliefs. Below follows a religious as well as scientific account of creation:

3.3.1 Religious account of creation

3.3.1.1 Account of creation in Christianity

- Christianity believes that God has three aspects: the Father, the Son (Jesus), and the Holy Spirit.
- Genesis 1 and 2 in the Old Testament of the Bible, tells the Christian story of creation of the world.
- According to it, in the beginning, God roamed the universe and the waters and created light and darkness.
- On the second day, God created Heaven and separated the water from the Earth. On the third day, he raised the dry land and created plants.
- On the fourth day, God made the light, 'day' and lesser light, 'night'. On the fifth day, he created the creatures of the sea and air.
- On the sixth day, God created all kinds of living creatures on the Earth. On the seventh day or Sabbath, God rested.

- The first humans that He created were Adam and Eve, who lived in Heaven, in the Garden of Eden. They were forbidden from eating the fruit of the tree of knowledge – of good and evil.
- But a serpent tempted Eve to eat the forbidden fruit, which she did and also successfully persuaded Adam to do so.
- When God came to know of their sin, he drove them to Earth, to toil. Christians believe that man is the most important of God's creations. They refer to the 'fall' to find answers to suffering and death.

There are slight variations in how the Abrahamic religions explain how the universe came into being, for example:

3.3.1.2 Account of creation in Islam

- The Qur'an states that Allah created the universe in six phases.
- Allah provides the energy and everything that the universe needs for survival.
- According to Islam, the existence of the universe is not accidental.
- Life is not purposeless, but planned and purposeful.
- Each variety plant and animal species in the world has important roles in the ecosystem.
- New forms of life are continuously being created and function according to established divine laws.
- The universe is not eternal but has a fixed timespan.

3.3.1.3 Account of creation in Judaism

- The word of G-d brought everything into being: heaven and earth, mountains and rivers, and every living thing. In the beginning, G-d called into existence the heaven and earth. Within six days He shaped a world of order and beauty.
- On the first day, G-d said, "Let there be Light" — and there was Light.
- On the second day G-d made the sky, and called it Heaven.
- On the third day, G-d put the earth into good shape. At His command the waters of the earth gathered together at certain places. The waters formed seas and oceans, lakes and rivers, so that in other parts, the dry land became visible.
- At G-d's further command, the earth was made to produce all kinds of plants, grass, and trees, shrubs and flowers. Each contained its own seed for further growth and reproduction.

- On the fourth day, G-d made the Sun, the Moon, and the Stars, to shed light upon the earth. And so He set a time for day and a time for night, a time for the week, the month, and the year, and a time for each of the four seasons.
- On the fifth day, G-d filled the seas with fishes and other water animals. In to the air above the earth He put many birds of all kinds and colours and sizes.
- On the sixth day, were created all the other animals, large and small, those that walk and those that creep or crawl on the earth. And towards the end of the sixth day, G-d put a divine soul into a body which He made of earth and clay. This was the human.
- To the human G-d granted high mental ability that one could think and reach one's own conclusions. G-d also gave the human the power of speech and He made humans superior to all other creatures of the earth.
- G-d placed all the creatures of the earth and the powers of nature in the control of the human.
- By the seventh day, everything was created and put into shape and order. And G-d rested on the seventh day and He glorified it as a day of rest. Therefore, we should work for six days and rest on the Seventh day, Shabbat, which G-d blessed and sanctified (declared to be holy) for all time to come. By observing the Shabbat day, we show that we believe in G-d as the Creator of the world.

Adapted from: Creation of the World - Jewish History (chabad.org)

3.3.1.4 Account of creation in Hinduism

- Hinduism believes that this is not the first world or universe. There have been and are many more worlds.
- To Hindus the universe is the creator.
- Hinduism does not contradict the big bang theory
- The Creator has existed and will exist for all time.
- The Creator has no limitations and therefore is not a 'he' or 'she' or anything else.
- The creator is simply the creator.
- The Creator exists in either active or passive state.
- The passive state is a state of rest when nothing happens.
- After a very long time the creator becomes active.
- This is when parts of the universe look different from other parts, and creation begins.
- Humans are a product of creation.
- Every 'night' that Lord Brahman sleeps, the world is destroyed, and recreated every 'morning' that he wakes up.
- This cycle of the 'yugas' is ongoing and continues forever.

3.3.1.5 Account of creation in Taoism

- In Taoism, the world and everything in it comes into being automatically as part of the activity of the Tao.
- It is not planned, but it is also not unplanned.
- The Tao did not intend the world to exist, nor did it not want the world to exist.
- The world simply emerged as a tiny speck in the enormous 'bowl' of creation as the Tao continued on its path.
- According to Taoism the world consists of processes of creation and destruction.
- The Taoist view of the universe is based very much on their observation of the natural and human world.

3.3.1.6 Account of creation in the Baha'i Faith

- They believe God created the universe and humans are the supreme amongst all its creatures.
- Human beings with their rational powers are able to conquer the world.

- The world is a transitory place.
- The world and what is in it are not worthy of attachment.
- Humans are reminded that they must detach themselves from things of the world.
- Living in this world, the Baha'is believe they are given a chance to develop virtues, build character and advance spiritually.
- The world is one place, the home of all humankind.

3.3.1.7 Account of creation in Buddhism

- Buddhists believe that the world was not created at any point in time.
- The world has been created millions of times every second and will continue to do so by itself. The world will break away by itself.
- According to Buddhism, the world system always appears and disappears in the universe.
- The universe, in which we live, has existed for an enormous period of time and possibly for endless time. Therefore, explanation of the origin of the world is not a concern in Buddhism.
- In the eyes of Buddha, the world is nothing but Samsara – the cycle of repeated birth and death.

3.3.1.8 Account of creation in the African Traditional Religion view (ATR)

- The idea of a personal God as creator is not a central belief in ATR. The beliefs of ATR about the creation are explained through a variety of myths. These myths should be interpreted as symbolic and not literally.
- Explanations about the creation of the universe (cosmogony) and the nature and structure of the world (cosmology) form the core philosophy of African religions.
- These explanations are conveyed in a story form that scholars often refer to as a myth.
- ATR explains how the world was put into place by a divine personality or Supreme Being.
- Therefore, the Supreme Being in collaboration with lesser supernatural beings who act on his behalf, have helped in the process of creating the world.
- In several cultures a supreme deity performs creation through mere thought processes.

- In other cases, the Supreme Being instructs lesser deities on how to create by providing them with materials to undertake the process.
- For instance, the Yoruba believe that the Supreme Being, Olódùmarè, appointed the orisa (deities) to be responsible for creating the universe.
- In the creation story of the Abaluhya of Kenya, the Supreme Being, called Wele Xakaba, created the universe in a manner that resembles the seven-day creation of the world by God in the Bible, with the seventh day being a time of rest.
- There are myths that say the world was created out of an existing abyss or a watery universe uninhabited by animate beings.

Adapted from: African Traditional Religions | Encyclopedia.com

3.3.2 A scientific account of creation – Big Bang Theory



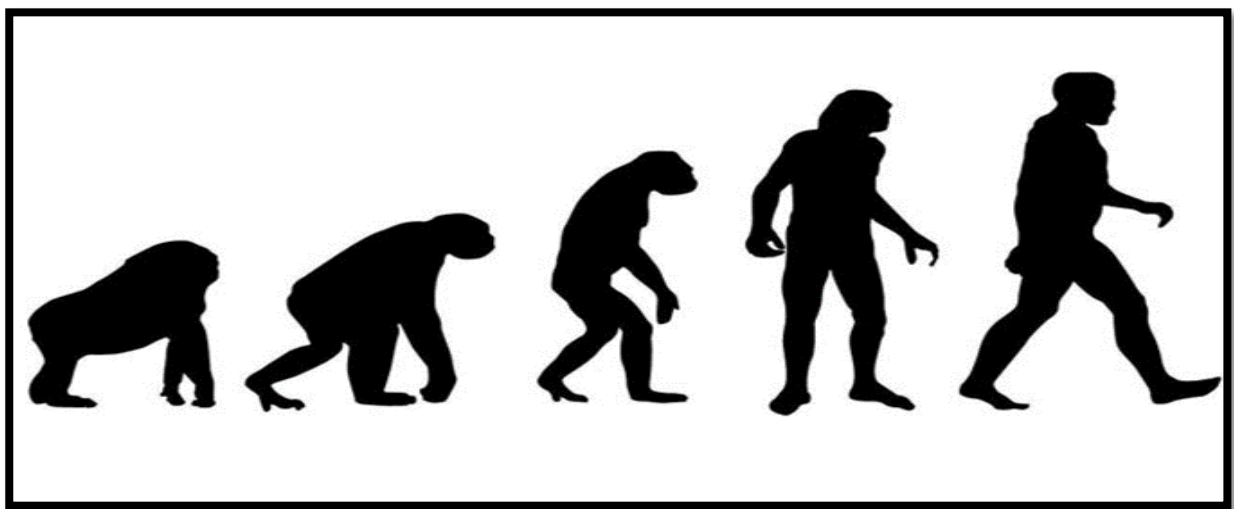
Source: a timeline for the Big Bang Theory - Bing images

The Big Bang Theory

- The most popular scientific theory of the universe is the so-called 'Big Bang' theory.
- According to this theory, we don't know what existed before the Big Bang.
- But there was an enormous explosion, and, within seconds, the universe had appeared and filled out to an enormous size.
- This happened about 13.7 - 15 billion years ago.
- Small temperature differences in the initial explosion led to varying densities throughout the universe.
- These eventually formed into clusters of matter and energy.
- The clusters continued to condense in a lumpy way and eventually formed the vast collections of stars we called galaxies.
- Some of the lumps in galaxies condense into a combination of stars and planets. We call such groupings 'solar systems.'

- Scientists believe that the universe is still expanding but it is not known whether or how the universe will end.
- Not all scientists agree with the Big Bang theory.
- Many of their objections are to do with the details within the process, not the underlying principle that it happened.
- Similarly, there are different hypotheses about how life began on Earth.
- These can be tested, but scientists cannot be sure which are correct because it happened long ago.

3.3.3 Religion and the theory of evolution



Source: evolution images - Google Search

3.3.4 Charles Darwin's Theory of Evolution

- Charles Darwin published a book called 'On the Origin of Species'. This book was based on his studies of creatures he had encountered on his travels to many overseas locations, including the Galapagos Islands.
- He put forward the theory that all living creatures that exist today, including human beings, have evolved over a period of perhaps millions of years, from more primitive life forms to how they are today.
- The theory proposes that all life evolved through a process called natural selection from primitive forms and continued to adapt and evolve.
- It asserts that humans have evolved from an ancestor shared with apes.
- The Theory of Evolution, according to Charles Darwin, consists of the following ideas:

- Species contain a great variety of minor differences. In the fight for survival, better adapted stages will be favoured while those that are not fit will struggle to survive.
- This applies to change in humans as well. In the fight for survival, humans changed from apes to human beings.
- The process of change and adaptation happened over a very long period.
- Science offers no explanation of creation as part of a divine plan.

3.3.5 Religious counter arguments against Darwin's Theory of Evolution

- Darwin who was a natural science graduate and a geologist was a Christian and had no intentions to challenge religious beliefs with his book.
- However, many religious believers responded with fury to Darwin's Theory of Evolution. Christians argued that:
 - The Theory of Evolution seemed to go against religious teachings that God made the Earth and created all living things, as they knew them.
 - Christians believed that God had created humans 'in His own image'
 - They believed that humans were superior to all other creatures and had a soul that is immortal.
 - They argued that Theory of Evolution challenged the idea that God is the designer of the universe.
 - They put forward that the beauty, order and complexity of the universe is evidence of the fact that God had a perfect design (also known as an Intelligent Design) when He created the world.
 - The idea that living things adapt to their environment was opposed to their belief that God had created the perfect environment for them.
 - The Bible says humans were created on the sixth day of creation, not over a period of millions of years.

Adapted from: Theory of evolution - Religion and science - GCSE Religious Studies Revision - BBC Bitesize

3.3.6 Rejection of the Theory of Evolution by certain strands of Judaism and Christianity

- There are two views of creation of man amongst Judaism. The Conservative Jews believe that the Genesis story should be treated as a symbolic account of the creation of man. This view tends to tie in with the Theory of Evolution. An argument is put forth that whilst God remains the Creator, the Theory of Evolution uncovers some of the laws that govern the creation.
- A second view that is supported by the Orthodox Jews totally rejects the Theory of Evolution, arguing that it goes against the literal words of the scriptures. The rejection of the Theory of Evolution by Orthodox Jews corresponds to the same stance that is adopted by Conservative or Fundamentalist Christians.

3.4 Religious account of the creation of human beings

Different religions provide different perspectives of how human beings came into being. Below follows a religious account of the creation of human beings:

3.4.1 Account of creation of human beings in Abrahamic religions

- There is no connection between the traditional Christians and the Theory of Evolution.
- Traditional Christians only accept that God created Adam and Eve as it is narrated in the Book of Genesis.
- They argue that there is no evidence in history of human beings evolving the world.
- However, there is a connection between the Theory of Evolution and liberal or progressive Christians.
- They argue that everything in the universe was created by God, and the process of evolution is also part of the Divine Plan. (It is referred as 'intelligent design').
- They say God was responsible for the Big Bang.
- Most Christians would accept that the central message of both Genesis 1 and 2, whether seen as one or two stories, is:
 - God made everything
 - God made everything good
 - God made humanity as the highpoint of creation

- Christianity's response is like that of the other two Abrahamic faiths: the conservatives reject Darwin's theory, while liberals merge it into a more flexible interpretation of sacred text.
- Fundamentalist Christians believe that as the Bible comes directly from God, everything in it must be the exact truth. Anything that contradicts the Bible is wrong. Therefore, for fundamentalist Christians, the Big Bang theory is not correct.
- Darwin's theory, then, is seen as an affront to the Biblical account of Creation.
- Some Christians believe that the Bible should be interpreted symbolically and not literally.
- Progressive Christians accept the idea of guided/theistic evolution and add that the creation myth must be seen as symbolic. They admit that there were some stages of creation which involved evolution, as explained by scientists.
- They believe that God was responsible for the beginning of the universe – that He set things in motion and oversaw the process. They can also learn lessons from the story about the importance of mankind and the responsibility mankind has over the rest of creation.
- These people believe that there is no conflict between science and religion.

3.4.2 Account of creation of human beings in Buddhism

- Buddhism does not have any account of creation.
- Therefore, Buddhists do not mind what scientists say about how the universe and how people came into being.
- Buddhism also believes that all life involves constant transformation and evolution.
- They believed in evolution long before Western scientists did.
- They believe in the continuity of all living beings.
- This explains why Buddhism has no problem with the idea that human beings may have evolved from more primitive, primate forms.
- This is in line with other Eastern religions.

3.4.3 Account of creation of human beings in Hinduism

- Hindus have no problem with the Theory of Evolution.
- They believe that the universe is based on evolution.
- They believe that they have a more advanced theory of evolution than the scientific one.
- The scientific theory is limited. It focuses only on the physical perspective of creation.
- Hindus believe that humans have control over their spiritual and physical evolution.

- Hindus believe that if one lives a good life one will evolve through many rebirths until one is physically and spiritually advanced.
- Ultimately, one will achieve liberation from the physical and be one with God.
- Hindus believe that there is an intelligent designer behind everything like evolution of humanity and of the universe.
- Hindus believe that they have a more advanced theory of evolution than the scientific theory.
- Hinduism provides a more comprehensive view of evolution, because it is not limited to physical but includes spiritual evolution.
- Hindus believe that you have control over both your spiritual and physical evolution.
- According to Hinduism, if one lives a good life, one will gradually evolve through many rebirths until one is spiritually advanced.
- Retrogression of the soul is also possible.
- While Hinduism has no issues with Darwin's theory, its main focus is on spiritual evolution/ retrogression.

3.4.4 Account of creation of human beings in Taoism

- Taoism does not have a God in the way that the Abrahamic religions do.
- There is no omnipotent being beyond the cosmos, who created and controls the universe.
- According to the Tao-te-Ching "all things come from being, and being comes from non-being."
- In Taoism the universe springs from the Tao, and the Tao impersonally guides things on their way. Therefore, all things come from being.
- Man was created from two opposite natural forces, "yin" and "yang" that work together to create life (Taoism).
- The myth begins by stating that it was a time of darkness, and the world was like an egg.
- The world remained like that for eighteen thousand years until suddenly, the egg unhatched, a colourful light appeared, and life was born.

3.4.5 Account of creation of human beings in Judaism

- Fundamental to Jewish beliefs about human beings is that they are created in the image of God. This does not mean that people look like God, for God is incorporeal.

The general rabbinical interpretation of this concept is that humans have the ability to reason.

- Genesis 2:7 says "God formed man," - this means God moulded man.
- According to this view, God gave man the moral conscience that reminds a person of God's law when one considers a specific action or choice.
- God also gave man the impulse to satisfy one's own needs and desires.
- There is nothing intrinsically evil about the impulse to satisfy one's needs, as it was created by God and is natural to humankind. It is also what drives us to good things such as eating, drinking, having a family, and making a living. However, it can easily lead to sin when not kept in check by the moral conscience.
- The idea of human' free will is fundamental to Judaism.
- The concept of original sin is rejected, as every person is seen as having the ability to choose good or evil.

Adapted from: Jewish views of human nature - ReligionFacts

3.4.6 Account of the creation of human beings in ATR

- ATR is a religion without a common scripture or single founder who can explain their understanding of the origin of man.
- In African traditional religions the cosmogony (theory of the origin of the universe) usually describes humans appearing near the end of creation.
- In many creation stories God is likened to a potter who creates humans out of clay and then pours the breath of life into them.
- African religions rely on the memory of oral stories as well as myths to explain what is not obvious.
- According to traditional African views, man was created by God.
- There are many myths and stories all over Africa which tell about the creation of man.
- Practically all African people have their own myths about it.
- Some of these myths differ considerably from people to people while others are remarkably similar across the continent.
- The general belief in ATR is that man was created by God, or a Supreme Being.
- This explanation affords man the highest dignity and satisfactorily fits in with the other African ontological and cosmological beliefs.

- The mythical explanations about the origin of human beings vary as to where they were created (on earth or in the sky or heaven)
- It also varies in terms of how they were created (moulded from clay, they fell like fruit from a tree, etc.).
- Regardless of the details, the main ideas from ATR are that:
 - man was created by God;
 - in almost every case it was either husband and wife, or two pairs;
 - the creation of man took place generally at the end of the creation of other things.
- This last point may indicate that people believe that man was the completion or perfection of God's work of creation, since nothing else better than man was created afterwards.
- In some myths God is pictured as creating man without any assistance from what he had already created; but in others it is said that God used the help of some of the other creatures, either spirits or animals, but these acted under God's direction.

Adapted from: Microsoft Word - J P Chalk - Thesis - DLitt et Phil.doc (unisa.ac.za)

3.4.7 Account of the creation of human beings in the Baha'i Faith

- Bahá'ís believe that the story of creation in Genesis is a rudimentary account that conveys the broad essential spiritual truths of existence without a level of detail and accuracy that would have been unnecessary and incomprehensible at the time.
- Likewise, 'Abdu'l-Bahá said that the literal story of Adam and Eve cannot be accepted, affirmed, or imagined, and that it "must be thought of simply as a symbol".
- And rather than accepting the idea of a Young Earth, Bahá'í theology accepts that the Earth is ancient.
- Baha'i writings describe humanity as God's creation, say that humans have always existed potentially, and characterize human reality as distinct and different than animal reality.
- The Baha'i teachings compare this process of development to growth of an embryo into an adult or the growth of a seed into a mature tree.
- Baháí teachings seem to differ from the standard evolutionary picture of human development, where Homo sapiens as one species along with the great apes evolved from a common ancestor living in Africa millions of years ago.

- While 'Abdu'l-Bahá states that man progressed through many stages before reaching this present form, 'Abdu'l-Bahá states that humans are a distinct species, and not an animal.
- Thus, in every stage of evolution through which humans progressed, they were potentially humans. Humans did not appear all at once, but developed through degrees and stages.
- Man is much more than an animal, according to the Baha'i writings. Man has a threefold reality:
 - Man is endowed with an outer or physical reality
 - But man is endowed with a rational or intellectual reality.
 - Yet there is a third reality in man, the spiritual reality.
- In short, the Baha'i writings describe evolution as having proceeded stage by stage from the world of inanimate matter to the world of humanity.
- In this process, there is no departure from the evolutionary sciences.
- Rather, the departure is from certain of the perspectives and interpretations that have developed around the evolutionary sciences.

Adapted from: A Baha'i Take on the Creation/Evolution Debate | HuffPost Communities

3.5 The changing relationship between religion and the natural sciences

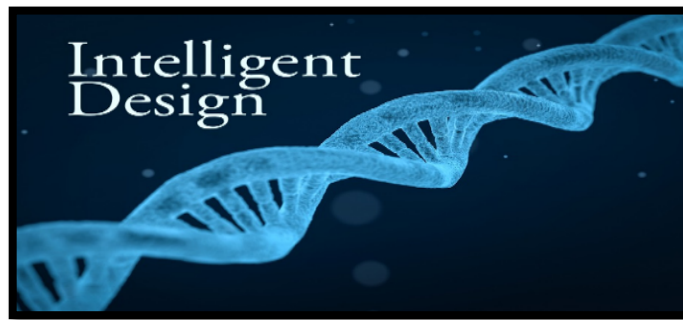
3.5.1 Changing perspective from a religious context

These scientific theories were first put forward in the 19th century, when Christianity was an important influence on people's lives and the way they thought. Many people saw them as a direct attack on their faith. Charles Darwin faced criticism from people who could not accept what they saw as his 'anti-religious' ideas.

- The Genesis creation story is at least 2,500 years old and was written when people lived completely different lives in an undeveloped environment.
- Answers to very difficult questions, such as how human life began, usually involved God because God was seen as the source and explanation for everything. The study of science was then largely unknown.
- The Genesis stories should not be compared too closely to scientific theories. These scientific theories are much more recent.
- There are some, more conservative Christians who believe that the seven days of creation outlined in the Bible refers to seven long periods of time.

- They argue that the order in which living things were created according to the Bible may have similarities to the order scientists accept evolution took place (plants, sea creatures, flying creatures, land animals and finally humans) and that this makes the Bible's account more credible.
- In modern religious circles there are some arguments that perhaps religion and science could be complementary. The arguments put forward are that:
 - The Genesis creation story does not seek to offer a scientific answer to questions about the origins of the universe.
 - It is more concerned with making it clear that God is in complete control and that the universe exists because God wants it to.
 - God designed the universe and the Earth to be this way for a purpose.
 - If Darwin's theory of natural selection is to be accepted, it is because God oversees this natural process. God created nature along with everything else.
 - Christians have put forward the theory of Intelligent Design (ID), that everything is planned and designed by God. They argue that each and every change that takes place is the direct working of God in creation.

3.5.2 Intelligent design



Source: intelligent design images - Bing images

- Intelligent design (ID) is a scientific theory that acknowledges the existence of God in the creation of the universe.
- This theory proposes an alternative to evolutionary explanation of how the creation of the universe occurred.
- Those who believe in this theory state that certain features of the universe and of living things are best explained by an intelligent cause.
- According to the Intelligent Design Theory, the fine-tuning of universal constants that make matter and life possible, cannot be solely attributed to chance.
- Furthermore, if the values of e.g. nuclear forces, electromagnetism and gravity were slightly different during the process of creation, then galaxies would not have existed.
- Thus, supporters of the ID Theory argue that an intelligent designer of life was needed to ensure that the required features were present to achieve that particular perfect outcome.
- They dispute the fact that creation of the universe occurred due to an undirected process such as natural selection.
- The Intelligent Design Theory presents two main arguments against evolutionary explanations, namely that:
 - certain biological and informational features of living things are too complex to be the result of natural selection.
 - messages transmitted by DNA in the cell show "specified complexity" – specified by intelligence, and must have originated with an intelligent agent.
- Intelligent design avoids identifying or naming the intelligent designer—it merely states that one (or more) must exist—but leaders of the movement have said the designer is the Christian God.
- Scientists have generally responded that the arguments of an Intelligent Design are poorly supported by existing evidence.
- They argue that life as we know it might not exist if things were different, but a different sort of life might exist in its place.
- A number of critics also suggest that many of the stated variables appear to be interconnected and that calculations made by mathematicians and physicists suggest that the emergence of a universe similar to ours is quite probable.

Source: adapted from Intelligent design – Wikipedia

3.5.3 ACTIVITIES

The activities below serve to provide examples of how the content on Science and Religion could be examined. The questions below were taken from past year papers. Instead of providing answers to the questions, you will be guided on:

- how to analyse the question/s, and
- how to answer the question/s.

1. Briefly explain the Big Bang theory (Nov 2020) / briefly explain the scientific account of how the universe came into being (Nov 2017/ Nov 2018).

How to answer this question:

- This question may be examined in a straight forward manner where you are required to explain the Big Bang Theory.
- Remember that the Big Bang Theory is associated with the CREATION of the UNIVERSE
- But the Big Bang Theory may also be referred to as the scientific account of how the universe came into being.
- Generally, you will be required to provide a scientific and religious explanation of how the universe came into being.

2. Compare the differences between the Abrahamic Religions versions of creations and the Big Bang theory (Nov 2019)/ Discuss the response of a non-Abrahamic religion to the Big Bang theory (Nov 2019).

How to answer this question:

- The two questions above require:
 - An Abrahamic account of creation – answer this question by referring to Christianity, Islam and Judaism
 - A non-Abrahamic account of creation – answer this question by referring to ATR, Buddhism, Hinduism, Taoism, Baha'i Faith
- The second aspect that needs to be discussed is the Big Bang Theory – this is the scientific explanation of how the universe came into being.

3. Compare the scientific and the religious accounts of how the universe came into being (Nov 2018).

How to answer this question:

- First identify 2 issues in this question:
 - Scientific explanation of how the universe came into being (creation of the universe) – Big Bang Theory
 - Religious explanation of how the universe came into being (creation of the universe) – the religion is NOT specified. Therefore, you can choose ANY religion
- A comparison requires that you provide opposing views of how the scientific approach differs from the religious explanation of how the universe was created.

4. Briefly explain Darwin's theory of evolution (Nov 2019)/ Discuss the scientific explanation of how human being came into being.

How to answer this question:

- Darwin's Theory refers to how species (animals and human beings evolved).
- Darwin's Theory is also known as the scientific theory of how human beings came into being.
- Therefore, both questions simply require that you give back the knowledge that you have about how species evolved.

5. With reference to the teachings of any ONE Eastern religion, explain how the universe came into being. (Nov 2021)

How to answer this question:

- In terms of the religious explanation for the creation of the universe you may either be requested to give an explanation based on:
 - A specified religion (any of the 8 prescribed religions could be specified)
 - An Abrahamic Religion (i.e. Islam, Christianity, Judaism)
 - An Eastern Religion (i.e. Buddhism, Hinduism, Taoism)
- In the question above there is specific reference to ONE Eastern Religion. Therefore you may choose either the account by Buddhism, Hinduism or Taoism to explain how the universe was created.

6. Critically evaluate the responses of the following religions to Darwin's theory of evolution:

6.1 Buddhism (Nov 2021)

6.2 Christianity (Nov 2021)

6.3 Hinduism (Nov 2021)

How to answer this question:

- For this question you need to have an understanding of 5 issues, namely
 - What is meant by critically evaluate
 - Darwin's Theory of Evolution
 - Account by Buddhism on the creation of man
 - Account by Christianity on the creation of man
 - Account by Hinduism on the creation of man
- Provide a discussion of above.
- Provide a judgement of the accounts given.

7. 'Where does the human race come from?' This is a question that has been asked by all civilisations, both ancient and modern.

7.1 Give the scientific answer to the question above.

How to answer this question:

- The statement "where does the human race come from" refers to the creation of man or origin of man
- The scientific answer to this question refers to Darwin's Theory of Evolution
- The question therefore requires you to use Darwin's Theory to Evolution to explain the creation of man or origin of man

7.2 'Where does the human race come from?'

Answer this question with reference to the beliefs of any TWO of the following religions:

7.2.1 Christianity

7.2.2 Taoism

7.2.3 Hindus

How to answer this question:

- Use any two religions and provide a religious account on creation of man or origin of man

EXEMPLAR EXAM QUESTION and MARKING GUIDELINE

Please note that the question below is an example of how the content on Religion and Science could be tested.

It is important that you study ALL the sub-topics before you attempt the activities. It is also important to:

- a. ANALYSE the question;
- b. UNDERSTAND what you are required to do; and
- c. APPLY the KNOWLEDGE and SKILLS that you acquired!

QUESTION 1 (taken from Feb/March 2013)

Read the statement below and answer the questions that follow:

In the middle of the 19th century, biologist Charles Darwin published his theory of evolution in *The Origin of Species*. This was the first non-religious explanation of how the world was created and where humans came from.

[Source: Focus on Religion Studies, Donne et al., p 99]

1.1 Discuss ONE religion's response to the theory of evolution in detail. (10)

1.2 With reference to the religion in QUESTION 5.1, discuss what the religion believes about:

1.2.1 Creation (10)

1.2.2 How human beings made their appearance (10)

1.3 Read the following statement and answer the questions that follow:

The big bang theory is the latest explanation of how the universe came into being.

1.3.1 Briefly discuss the big bang theory. (10)

1.3.2 Do you think there are contradictions between religious beliefs and the big bang theory? Give reasons for your answer. (10)

[50]

Marking Guideline

QUESTION 1

1.1 Response of ONE religion to the theory of evolution

Christianity

- Many Christians resolve the conflict by suggesting that the Bible should be interpreted symbolically and not literally.
- They say there is no conflict between science and religion as long as one sees science to be uncovering the laws that God set in motion to create the universe.
- They reject the ideas that the world came into existence over billions of years, and
- that humans might have evolved from ape-like forms.
- They believe that there was a single great flood and that humanity had to restart after
- the flood.
- Whereas scientists believe there may have been localised floods but no great flood.
- Some Christians argue that certain aspects of creation are too complex to have happened by natural selection. Only God could have created these things.

Buddhism

- Buddhism and the theory of evolution are in agreement.
- It does not have an account of creation.
- Buddhists do not mind what scientists say about how the universe and people came into being.
- Buddhists believe that all life involves constant transformation and evolution.
- Buddhists believed in evolution long before western scientists did.
- Buddhists believe in the continuity of all living beings.
- They have no problem with the idea that human beings may have evolved from more primitive, ape-like forms.

Hinduism

- Hindus have no problem with evolution because they believe that the universe is based on evolution.
- Hindus believe that they have a more advanced theory of evolution than the scientific theory, which is limited because it only sees as far as the physical.
- Hindus believe that Hinduism provides a more comprehensive and 'truer' view of evolution because it includes the spiritual.
- Hindus believe that you have control over both spiritual and physical evolution, whereas scientists see evolution as a process that happens by chance.
- If you live a good life you will gradually evolve through many rebirths until you are physically and spiritually advanced.
- Ultimately you will achieve liberation from the physical and become one with God.

[NB: responses by any other religion to the theory of evolution must be credited.]

1.2.1 Beliefs about creation

Christianity

- According to Christianity in the beginning there was nothing but chaos.
- The book of Genesis says God created the world and the universe in six days
- and rested on the seventh day.
- The world was perfect after the Holy Trinity had finished with the creation.
- Human, marine, animal and plant life all belong to God.

Buddhism

- The world is just one of millions of worlds.
- In each of these worlds a Buddha will rediscover the true nature of beings.
- Buddhism flourishes for thousands of years and then it slowly dies out.
- Another man will try to understand why people suffer and he becomes the next Buddha.
- Each cycle has a Buddha.

Hinduism

- There are many different gods and goddess in the in the universe.
- These gods and goddess are the manifestations of the same divine power.
- Brahman is not a supreme being or a deity.
- Brahman or the 'World Soul' is the divine power that makes up the entire universe.
- Time is cyclical.
- This means that the universe did not have a sudden start or beginning nor it will have a sudden end.
- The universe is without beginning and without end, going through recurrent phases of manifestations and dissolution.

1.2.2 How human beings made their appearance

Christianity

- According to scripture, man was created in God's own likeness.
- Human beings reflect the characteristics, the attributes and even the personality of God.
- In the Christian view no person should dominate or exploit any other.
- God created man and woman to be companions.
- The first humans were Adam and Eve, whom God had fashioned out of clay.
- They disobeyed God in the Garden of Eden, and were banished to Earth.
- Humans should be a community, serving God and living by His laws.
- Individuals should look and protect one another.
- Human beings are the highest form of God's creation.

Buddhism

- Human beings are blessed with immortal souls that set them apart from other creatures.
- Human beings are part of reality and have no special status.
- They may be reborn as animals as a punishment.
- Humans sit in the middle of creation.
- Above them are gods and the animals are below human status.
- You have to be born as humans to attain nirvana.

Hinduism

- Hinduism teaches that all human beings have immortal soul (atman).
- An immortal soul is trapped in the body by an ongoing cycle of birth, death and rebirth.
- Unlike the body, this soul never dies and can never change because it is the true nature of a person.
- The soul is part of the great divine power.
- The soul is separated from Brahman by the physical body and a person's ignorance of the truth that atman is one and the same as Brahman.

[NOTE: Discussion of any other religion must be credited.]

1.3.1 Big bang theory

- Currently, the most popular scientific theory of the universe is the so-called big bang theory.
- Before the big bang it was not known what existed.
- After the big bang the universe appeared and filled out to an enormous size.
- It appeared about 15 billion years ago.
- Small temperature differences in the initial explosion led to varying densities throughout the universe.
- These eventually formed into clusters throughout the universe.
- Huge spaces separated from these clusters.
- They formed vast collections of stars that we call galaxies.
- Some galaxies condensed into a combination of stars and planets called solar systems.
- Our earth is one of the solar systems.
- This is where the evolution of life takes place.
- Again the theory dispels the existence of a divine being.
- It only provides scientific (factual) explanation of the structure and composition of the universe.

1.3.2 Contradiction between religion and big bang theory

No, there is no contradiction

[Hinduism is used as an example]

- To Hindus the universe is the creator.
- Hinduism does not contradict the big bang theory
- The Creator has existed and will exist for all time.
- The Creator has no limitations and therefore is not a 'he' or 'she' or anything else.
- The creator is simply the creator
- The Creator exists in either active or passive state.
- The passive state is a state of rest when nothing happens.
- After a very long time the creator becomes active.
- This is when parts of the universe look different from other parts, and creation begins.
- Humans are a product of creation.

Yes, there is a contradiction.

[Middle Eastern Religions as an example]

- The scriptures of the Middle Eastern Religions – Judaism, Christianity and Islam are said to be inspired by God or to be the direct word of God.
- They share a common view of creation.
- There is one omnipotent, omniscient, perfect creator.
- He created human beings as the centrepiece of creation.
- Creation took six days; it started by separating light from darkness.
- All matter was made from nothing
- There were only two humans to start with, who had been made from clay.
- Their names are given as Adam and Eve.

1. Discuss the responses of any ONE religion to the following fundamental questions about human existence:

- What was man's origin?
- What is the role of humankind in the universe?
- What is humankind's ultimate destination?

How to answer this question?

Q: What was man's origin?

- Choose any ONE religion that you have studied to answer all the three questions asked.
- Explain how man came into being / existence in the religion that you have chosen. Refer to the notes about nature of humanity in the Study Guide.

Q: What is the role of humankind in the universe?

- Continue to use the same religion that you have chosen in the first question to discuss the role of humanity in the world and human kind's ultimate destination

2. According to some religions human sufferings is caused by evil. Do you agree with the statement? Support your answer by referring to the teachings of any ONE religion.

HOW TO ANSWER THIS QUESTION

- Think of a religion that does not agree to the statement
- Explain the teaching of the chosen religion about origin and role of evil.

OR

- Think of a religion that agrees to statement
- Explain the teaching of the chosen religion about origin and role of evil.

4. Study and exam tips

4.1 Command verbs

Candidates need to be skilled in the application of knowledge. Analytical skills of candidates need to be developed through open- ended questions. It is essential that candidates have a good understanding of the “action words” commonly used in the NSC Examinations.

L1 and L 2		L3 and L 4		L5 and L 6	
Remembering	Understanding	Applying	Analysing	Evaluating	Creating
Exhibit memory of previously learned material by recalling facts, basic concepts; and answers.	Demonstrate understanding of facts and ideas by: organising, comparing, translating, interpreting, giving descriptions and stating main ideas.	Solve problems to new situations by applying acquired knowledge, facts techniques and rules in a different way.	Examine and break information into parts by identifying reasons or causes. Make inference and find evidence to support generalisations.	Present and defend opinions by making judgements about information, validity of ideas or quality of work based on a set of criteria	Compile information together in a different way by combining elements in a new pattern or proposing an alternative solution
Choose Define Find How List Match Name Relate Select What When Where Which Who Why	Classify Compare Contrast Explain Illustrate Outline Summarise Infer Relate Show Demonstrate	Apply Choose Develop Identify Interview Construct Report Change Conclude Demonstrate Discuss Explain Illustrate Interpret Report Review Summarise Tell Prepare Show	Analyse Assume Categorise Classify Compare Contrast Conclude Distinguish Examine Infer	Apply Appraise Assess Compare Conclude Consider Criticise Decide Defend Determine Evaluate Explain Interpret Judge Justify Recommend Support Argue	Change Choose Combine Compile Compose Construct Create Develop Elaborate Imagine Improve Plan Predict Propose Solve Suppose Produce

IMPORTANT:

- Command verbs guide us on what each questions is requiring us to do.
- Ensure that you analyse the question to understand the command verb.
- Use a highlighter to highlight or underline the command verbs.

4.2 Study and Examination Tips

The table below outlines the topics that need to be covered in Grade 12 for Religion Studies.

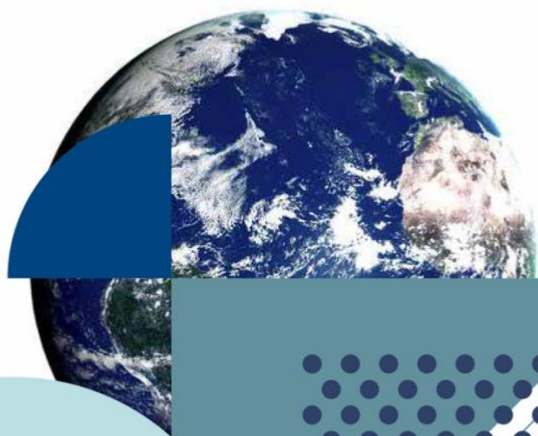
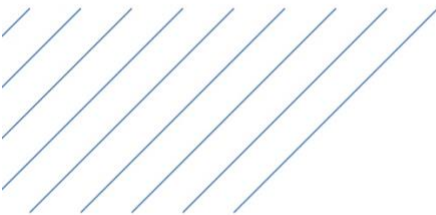
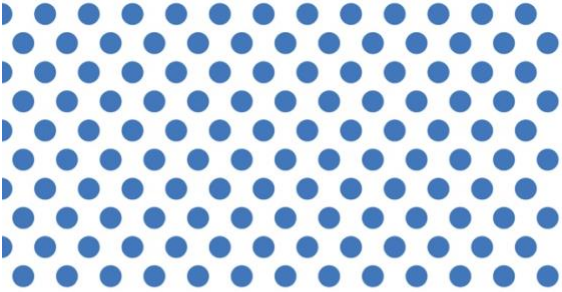
TOPIC	SUB-TOPICS
VARIETY OF RELIGIONS	<ul style="list-style-type: none">Conceptual distinctions• Internal differentiations within religions• Main features of such differentiations *• Unique features of various religions *• History and present dynamics of inter-religious relationships
COMMON FEATURES OF RELIGION AS A GENERIC AND UNIQUE PHENOMENON	<ul style="list-style-type: none">• Religious teachings• The central teachings in one religion• Normative sources in various religions• Interpreting one normative source• Analysis of secular worldviews• The origin, purpose and influencing factors behind at least two worldviews
TOPICAL ISSUES IN SOCIETY	<ul style="list-style-type: none">• Developing a strategy to solve a major social problem *• Role of media in influencing public opinion on religion *• Religious freedom, human rights and responsibilities
RESEARCH INTO AND ACROSS RELIGIONS	<ul style="list-style-type: none">• Religion in areas of conflict in South Africa, Africa and the world• Religion and the natural sciences

NB: The SELF STUDY Guide consists of 8 BOOKLETS that cover a variety of topics. The only topics that are not covered by the SELF STUDY Guide are those indicated with an asterix (*). These are generally open-ended topics that will require application of knowledge. You need to go through past papers to ensure that you see how this content is assessed.

5. REFERENCES

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Hofmeyr, J;Mndende, N; Maclagan,B; Ryan, M & Thraves, P. 2019: Shutter's Top Class Grade 12 Learner's Book.



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