

Year 12 Revision List - END OF YEAR EXAMS

(19th – 30th JUNE 2023)

These are the topics you will need to revise. Your teachers will give you access to the materials you need. Most of the resources for revision can be found on Teams. You should be making time to work extra hard in the weeks leading up to your end of year exams!

Biology

You will be sitting two, 1 hour 30 minute Biology papers which will contain questions on the following topics:

Unit 1 Biological Molecules

Unit 2 Cells

Unit 3 Organisms Exchange substances with their environment

Unit 4 Genetic Information, variation and relationships between organisms

You need to revise everything you have learnt this year.

Revision materials can be accessed via your Microsoft TEAM. You can also use your zig zag revision materials, Ulearn, work book/ revision guide, [Seneca learning](#) and www.physicsandmathstutor.com

Chemistry

You will be sitting two, 90-minute Chemistry papers which will contain questions on the following topics:

Paper 1 (Physical and Inorganic Chemistry)

3.1.1 Atomic structure; 3.1.2 Amount of substance; 3.1.3 Bonding, 3.1.4 Energetics; 3.1.6 Chemical equilibria, Le Chatelier's principle and K_c ; 3.1.7 Oxidation, reduction and redox equations; 3.2.1 Periodicity; 3.2.2 Group 2, the alkaline earth metals; 3.2.3 Group 7 the halogens.

Paper 2 (Physical and Organic Chemistry)

3.1.2 Amount of substance; 3.1.3 Bonding, 3.1.4 Energetics; 3.1.5 Kinetics; 3.1.6 Chemical equilibria, Le Chatelier's principle and K_c ; 3.3.1 Introduction to organic chemistry; 3.3.2 Alkanes; 3.3.3 Halogenoalkanes; 3.3.4 Alkenes; 3.3.5 Alcohols; 3.3.6 Organic analysis.

Revision materials can be accessed via your Microsoft TEAM. You can also use your text book/ revision guide, Isaac Chemistry, [Seneca learning](#), [www.physicsandmathstutor.com](#) and [www.alvelchemistry.co.uk](#)

Geography

Physical

1. The carbon cycle
2. Global distribution, and size of major stores of carbon – lithosphere, hydrosphere, cryosphere biosphere, atmosphere.
3. Factors driving change in the magnitude of these stores over time and space, including flows and transfers at plant, sere and continental scales. Photosynthesis, respiration, decomposition, combustion, carbon sequestration in oceans and sediments, weathering.
4. Changes in the carbon cycle over time, to include natural variation (including wild fires, volcanic activity) and human impact (including hydrocarbon fuel extraction and burning, farming practices, deforestation, land use changes).
5. The carbon budget and the impact of the carbon cycle upon land, ocean and atmosphere, including global climate.
Water, carbon, climate and life on Earth
6. The key role of the carbon and water stores and cycles in supporting life on Earth with particular reference to climate. The relationship between the water cycle and carbon cycle in the atmosphere. The role of feedbacks within and between cycles and their link to climate change and implications for life on Earth. Human interventions in the carbon cycle designed to influence carbon transfers and mitigate the impacts of climate change.
7. Case study of a tropical rainforest setting to illustrate and analyse key themes in water and carbon cycles and their relationship to environmental change and human activity.

Human

1. The nature and importance of places - The concept of place and the importance of place in human life and experience.
2. Changing places and relationships - the ways in which the following factors: relationships and connections, meaning and representation, affect continuity and change in the nature of places and our understanding of place and

3. Relationships, connections, meaning and representation - The impact of relationships and connections on people and place with a particular focus on: changing demographic and cultural characteristics **or** How the demographic, socio-economic and cultural characteristics of places are shaped by shifting flows of people, resources, money and investment, and ideas at all scales from local to global.
4. Meaning and representation - The importance of the meanings and representations attached to places by people with a particular focus on people's lived experience of place in the past and at present.
5. Place studies- Local place study exploring the developing character of a place local to the home or study centre. Contrasting place study exploring the developing character of a contrasting and distant place.

Revision guides and scanned text book are on teams. Seneca as well

History

War of the Roses (Unit One)

French Revolution to the execution of Louis XVI (Unit Two)

All resources on TEAMS

AS Maths - 2 Test

Paper 1 is a 2-hour Pure exam.

Paper 2 is a 1-hour Statistics and Mechanics Exam.

Both papers will total 160 marks, and will cover all content in the year 12 syllabus. Your revision needs to be on everything taught this year, and more specific questions may be mentioned in lesson or on teams. Use the online textbook or borrow a textbook from room 340 (but please tell Mr Moore if you are borrowing one), and use any edexcel revision books or notes to help you.

Physics

You will be sitting two, 1 hour 30-minute Physics papers which will contain questions on the following topics:

Paper 1 & Paper 2

- Measurements and their errors
- Particles and radiation
- Waves
- Mechanics and materials
- Electricity

Revision materials can be accessed via your Microsoft TEAM. You can also use your text book/ revision guide, [Seneca learning](#) and [www.physicsandmathstutor.com](#).

English Literature OCR H472: Paper One: part A and B

Section A: Hamlet

Hamlet part a: Analyse the ways in which Shakespeare shapes meaning in the play, through language, form and structure.

Revise: characterisation, plot, themes, key quotations, writer's methods

Hamlet part b: Explore the play informed by different interpretations across time.

Revise: critical interpretations of the play across time, including stage and film adaptations. Key quotations and episodes in the text, linking to critical theory.

BTEC Applied Science

The Unit 1 exam was completed in January

Each section of the **Unit 2** coursework must be completed by the various deadlines.

Unit 2a Solutions

Unit 2b Calorimetry

Unit 2c Chromatography

Unit 2d Review

Please check with your teacher if you are unsure.

Sociology

You will complete 2 papers

Paper 1 Education and Methods 1 hour 30 minutes

Paper 2 Families and Households 1 hour 30 minutes

These assessments will be on all the content from this year. Please see your teams folders and lesson resources for revision materials. Sample exam paper can also be found on teams and in the common room study area.

Psychology

You will complete 2 AS papers each worth 72 marks.

Paper 1 – Social Influence, Memory and Attachment

Paper 2 – Approaches, Psychopathology, Research Methods

See Teams for your knowledge organiser and all lesson resources

Religious Studies

See Teams for revision resources.

Component 1: Christianity	
Theme	Specification
1A Jesus - His birth	Consistency and credibility of the birth narratives (Matthew 1:18-2:23; Luke 1:26-2:40)
	harmonisation and redaction
	interpretation and application of the birth narratives to the doctrine of the incarnation (substantial presence and the kenotic model).
1B Jesus - His resurrection	The views of Rudolf Bultmann and N.T. Wright on the relation of the resurrection event to history
	interpretation and application to the understanding of death, the soul, resurrected body and the afterlife, with reference to Matthew 10:28; John 20-21; 1 Corinthians 15; Philippians 1:21-24.
1C The Bible as a source of wisdom and authority in daily life	The ways in which the Bible is considered authoritative: as a source of moral advice (Ecclesiastes 12:13-14; Luke 6:36-37)
	as a guide to living (Psalm 119:9-16; Psalm 119:105-112);
	as teaching on the meaning and purpose of life (Genesis 1:26-28; Ecclesiastes 9:5-9)
	as a source of comfort and encouragement (Psalm 46:1-3; Matthew 6:25).
	How the Christian biblical canon was established.
1D The Bible as a source of wisdom and authority	Diverse views on the Bible as the word of God: different understandings of inspiration
	The objective view of inspiration
	The subjective view of inspiration
	John Calvin's doctrine of accommodation
	Its message and format: the kerygmata as presented by C. H. Dodd, with reference to Acts 2:14-39; 3:12-26
1E The early church (in Acts of the Apostles)	The challenges to the kerygmata (with reference to the historical value of the speeches in Acts and the work of Rudolf Bultmann).
	The adapting of the Christian message to suit the audience.

1F Two views of Jesus	<p>A comparison of the work of two key scholars, including their views of Jesus with reference to their different methods of studying Jesus: John Dominic Crossan and N. T. Wright.</p> <p>Crossan: Jesus the social revolutionary; using apocryphal gospels; seeing Jesus as a product of his time; what the words of Jesus would have meant in Jesus' time.</p> <p>Wright: Jesus the true Messiah; critical realism; texts as 'the articulation of worldviews'; seeks to find the best explanation for the traditions found in the Gospels.</p>
2A Religious concepts – the nature of God:	<p>Is God male? The issue of male language about God; the pastoral benefits and challenges of the model of Father; Sallie McFague and God as Mother.</p> <p>Can God suffer? The impassibility of God; the modern view of a suffering God illustrated by Jurgen Moltmann (The Crucified God)</p>
2B Religious concepts – the Trinity	<p>The need for the doctrine of the Trinity: the nature and identity of Christ (issues of divinity and preexistence) and Christ's relationship with the Father (co-equal and co-eternal)</p> <p>The origin of the Holy Spirit: the filioque controversy.</p>
2C Religious concepts – the Atonement	<p>Three theories of the Atonement (which are not mutually exclusive): the death of Jesus as Christus Victor (with reference to the liberation of humanity from hostile powers)</p> <p>The death of Jesus as a substitution (both the belief that Jesus died as a substitute for humanity, and the belief that only the divine-human Jesus could act as a sacrifice by God for the sake of humanity)</p> <p>the death of Jesus as a moral example (of how to live and die).</p> <p>The underlying assumptions about the need for divine forgiveness and the conflict between the wrath and love of God in theories of the Atonement.</p>
3A Social developments in religious thought – attitudes towards wealth	<p>The dangers of wealth (with reference to Mark 10:17-25; Matthew 6:25-34; Luke 12:33-34, 1 Timothy 6:10)</p> <p>apparent contradiction between biblical teaching on stewardship and the ascetic ideal;</p> <p>the prosperity gospel of the Word-Faith movement.</p>
3B Social developments in religious thought – migration and Christianity in the UK	<p>The challenges of Christian migration to the UK, with reference to assimilation, provision of worship, style of worship and issues of culture.</p> <p>The reverse mission movement to the UK.</p>

Component 2: Philosophy	
Theme	Specification
1A Inductive arguments - cosmological	<p>Inductive proofs; the concept of 'a posteriori'</p> <p>Cosmological argument: St Thomas Aquinas' first Three Ways - (motion or change; cause and effect; contingency and necessity).</p> <p>The Kalam cosmological argument with reference to William Lane Craig (rejection of actual infinities and concept of personal creator).</p>
1B Inductive arguments - teleological	<p>St Thomas Aquinas' Fifth Way - concept of governance; archer and arrow analogy</p> <p>William Paley's watchmaker - analogy of complex design</p> <p>F. R. Tennant's anthropic and aesthetic arguments - the universe specifically designed for intelligent human life.</p>
1C Challenges to inductive arguments	<p>David Hume - empirical objections and critique of causes (cosmological).</p> <p>David Hume - problems with analogies; rejection of traditional theistic claims: designer not necessarily God of classical theism; apprentice god; plurality of gods; absent god (teleological).</p> <p>Alternative scientific explanations including Big Bang theory and Charles Darwin's theory of evolution by natural selection.</p>
1D Deductive arguments - origins of the ontological argument	<p>Deductive proofs; the concept of 'a priori'</p> <p>St Anselm - God as the greatest possible being (Proslogion 2).</p> <p>St Anselm - God has necessary existence (Proslogion 3).</p>
1E Deductive arguments - developments of the ontological argument	<p>Rene Descartes - concept of God as supremely perfect being; analogies of triangles and mountains/valleys.</p> <p>Norman Malcolm - God as unlimited being: God's existence as necessary rather than just possible.</p>
1F Challenges to the ontological argument:	<p>Gaunilo, his reply to St Anselm; his rejection of the idea of a greatest possible being that can be thought of as having separate existence outside of our minds; his analogy of the idea of the greatest island as a ridicule of St Anselm's logic.</p> <p>Immanuel Kant's objection - existence is not a determining predicate: it cannot be a property that an object can either possess or lack.</p>

2A The problem of evil and suffering	<p>The types of evil: moral (caused by free will agents) and natural (caused by nature)</p> <p>The logical problem of evil: classical (Epicurus) - the problem of suffering.</p> <p>J. L. Mackie's modern development - the nature of the problem of evil (inconsistent triad).</p> <p>William Rowe (intense human and animal suffering) and Gregory S. Paul (premature deaths)</p>
2B Religious responses to the problem of evil (i):	<p>Evil as a consequence of sin: evil as a privation; the fall of human beings and creation; the Cross overcomes evil, soul-deciding</p>
Augustinian type theodicy	<p>challenges to Augustinian type theodicies: validity of accounts in Genesis, Chapters 2 and 3; scientific error - biological impossibility of human descent from a single pair (therefore invalidating the 'inheritance of Adam's sin); moral contradictions of omnibenevolent God and existence of Hell; contradiction of perfect order becoming chaotic - geological and biological evidence suggests the contrary</p>
2C Religious responses to the problem of evil (ii): Irenaean type theodicy:	<p>Vale of soul-making: human beings created imperfect; epistemic distance; second-order goods; eschatological justification;</p> <p>challenges to Irenaean type theodicies: concept of universal salvation unjust; evil and suffering should not be used as a tool by an omnibenevolent God; immensity of suffering and unequal distribution of evil and suffering.</p>

Component 3: Ethics	
Theme	Specification
1A Divine Command Theory	<p>God as the origin and regulator of morality; right or wrong as objective truths based on God's will/command, moral goodness is achieved by complying with divine command; divine command a requirement of God's omnipotence; divine command as an objective meta-physical foundation for morality.</p>
	<p>Robert Adams' 'Modified Divine Command Theory' (divine command based on God's omnibenevolence).</p>
	<p>Challenges: the Euthyphro dilemma (inspired by Plato); arbitrariness problem (divine command theory renders morality as purely arbitrary); pluralism objection (different religions claim different divine commands).</p>
	<p>Ethical system based on defining the personal qualities that make a person moral; the focus on a person's character rather than their specific actions</p>
1B Virtue Theory	<p>Aristotle's moral virtues (based on the deficiency; the excess and the mean); Jesus' teachings on virtues (the Beatitudes).</p>
	<p>Challenges: virtues are not a practical guide to moral behaviour; issue of cultural relativism (ideas on the good virtues are not universal); virtues can be used for immoral acts</p>
	<p>Agent focused ethic based on self-interest as opposed to altruism; ethical theory that matches the moral agent's psychological state (psychological egoism); concentration on long term self-interests rather than short term interests</p>
	<p>Max Stirner, is self-interest the root cause of every human action even if it appears altruistic?</p>
1C Ethical Egoism	<p>Rejection of egoism for material gain; union of egoists.</p>
	<p>Challenges: destruction of a community ethos; social injustices could occur as individuals put their own interests first; a form of bigotry (why is one moral agent more important than any other?).</p>
	<p>Aquinas' four levels of law (eternal, divine, natural and human); Natural Law derived from rational thought; based on a belief in a divine creator (the highest good as being the rational understanding of God's final purpose). Natural Law as a form of moral absolutism and a theory which has both deontological and teleological aspects.</p>
	<p>The five primary precepts (preservation of life, ordered society, worship of God, education and reproduction of the human species) as derived from rational thought and based on the premise of 'doing good and avoiding evil';</p>
2A St Thomas Aquinas' Natural Law - laws and precepts as the basis of morality:	<p>the secondary precepts which derive from the primary precepts; the importance of keeping the precepts in order to establish a right relationship with God and gain eternal life with God in heaven.</p>

2B Aquinas' Natural Law - the role of virtues and goods in supporting moral behaviour	<p>The need for humans to be more God-like by developing the three revealed virtues (faith, hope and charity) and four cardinal virtues (fortitude, temperance, prudence and justice).</p> <p>Aquinas' definition of different types of acts and goods: internal acts (the intention of the moral agent when carrying out an action) and external acts (the actions of a moral agent)</p> <p>real goods (correctly reasoned goods that help the moral agent achieve their telos) and apparent goods (wrongly reasoned goods that don't help the moral agent achieve their God given purpose).</p>
2C Aquinas' Natural Law - application of the theory:	<p>The application of Aquinas' Natural Law to abortion</p> <p>The application of Aquinas' Natural Law to voluntary euthanasia</p>
2D John Finnis' development of Natural Law	<p>Development of the seven basic human goods (life, knowledge, friendship, play, aesthetic experience, practical reasonableness and religion); distinction between theoretical / practical reason;</p> <p>Nine Requirements of Practical Reason (view life as a whole, no arbitrary preference amongst values (goods), basic goods apply equally to all, do not become obsessed with a particular project, use effort to improve, plan your actions to do the most good, never harm a basic good, foster common good in the community and act in your own conscience and authority); the common good and the need for authority.</p>
2E Bernard Hoose's overview of the Proportionalist debate	<p>As a hybrid of Natural Law, a deontological / teleological ethic</p> <p>a Proportionalist maxim ('it is never right to go against a principle unless there is a proportionate reason which would justify it');</p> <p>distinction between an evil moral act (an immoral act) and pre-moral/ontic evil; distinction between a good act (an act that follows the moral rule) and a right act (an act that is not necessarily a good act, but creates the lesser of two evils);</p> <p>proportionality based on agape.</p>
2F Finnis' Natural Law and Proportionalism: application of the theory	<p>The application of Finnis' Natural Law and Proportionalism to immigration</p> <p>The application of Finnis' Natural Law and Proportionalism to capital punishment</p>

Sport & Physical Activity (PE)

Unit 1 Body Systems and the effects of physical activity

See Teams for individual lessons / worksheets (in class resources).

LO1 skeletal system	<p>Axial & appendicular skeleton</p> <p>Functions of skeleton</p> <p>5 types of bone</p> <p>Classifications of joints (fixed / fused, slightly moveable, synovial joints)</p> <p>Structure and function of synovial joints</p> <p>Types of joint movements (flexion, extension, et al)</p> <p>Short-term and long-term effects of exercise on the skeleton</p>
LO2 Muscular system	<p>Name & label all major muscles of the body (anterior and posterior)</p> <p>Antagonistic pairs - Agonist, antagonist and fixator</p> <p>Structure and function of muscle fibres – 3 types of muscle fibre, characteristics and strengths / limitations of each, uses in sport</p> <p>Key words associated with muscles (page 10 in text book – hypertrophy et al)</p> <p>Short-term and long-term effects of exercise on muscles</p>
LO3 Cardiovascular system	<p>Structure of the heart and CV system, and roles of all components of heart</p> <p>Stroke volume, heart rate & cardiac output</p> <p>Structure of blood vessels (see key words on page 15)</p> <p>5 different blood vessels (arteries, arterioles, capillaries, veins and venules)</p> <p>Components of blood</p> <p>Vascular shunt mechanism and pre-capillary sphincters</p>

	<p>Short-term and long-term effects of exercise on the cardiovascular system</p>
LO4 Respiratory system	<p>Structures of lungs and their roles</p> <p>Key words of respiratory system (page 17)</p> <p>Mechanics of breathing at rest and during exercise</p> <p>Gaseous exchange</p> <p>Tidal volume, breathing frequency and minute ventilation</p> <p>Lung volume changes during exercise</p> <p>Short-term and long-term effects of exercise on the respiratory system</p>