

Year 12 Mock Examinations
Monday 16th May to Friday 27th May

Subject	Summary of Exam Type/Length	Topic content
Art and Design	1 large scale development piece (5 hours total)	A development piece completed using their own image as reference in their chosen style. Students are permitted to project before the mock if appropriate, and the nature of their work will be discussed and decided before the mock date, as per the final exam.
Biology	2 Papers: Paper 1: Breadth Paper Paper 2: Depth Paper Each paper will be 1 hour and 30 minutes	Year 12 Biology Modules are examined over both papers, this will include the practical and mathematical skills. Paper 1: Breadth Paper - 70 Marks This paper consists of 20 multiple choice and 50 structured questions. Paper 2: Depth Paper - 70 Marks This paper consists of structured questions only. All four modules are examined in both papers. This includes. Module 1: Practical Skills Module 2: Foundations in Biology Module 3: Exchange and Transport Module 4: Biodiversity, Evolution and Disease
Business	2 Papers each one 90 mins	Paper 1: Boston Matrix, Break- even analysis, Income and price elasticity, organisation structures, employee performance measures, motivation, budgeting and variances, capacity and utilisation, PESTLE, cash flow, inventory control, sources of finance, job design, marketing, employee representation. Paper 2: Break-even analysis and profit calculations, design mix, flexible workforces, stakeholders, location, business objectives, motivation.
Chemistry	2 Papers 90 mins each	Paper 1 Core Inorganic and Physical Chemistry (Topics 1-5). Paper 2 Core Organic and Physical Chemistry (Topics 2 & 5-10).
Computer Studies	2 papers, 1 hour 30 each	Paper 1: Computer Systems 1.1 The components of a computer and their uses 1.1.1 Structure and function of the processor (a) The Arithmetic and Logic Unit; ALU, Control Unit and Registers (Program Counter; PC, Accumulator; ACC, Memory Address Register; MAR, Memory Data Register; MDR, Current Instruction Register; CIR). Buses: data, address and control: how this relates to assembly language programs. (b) The Fetch-Decode-Execute Cycle; including its effects on registers. (c) The factors affecting the performance of the CPU: clock speed, number of cores, cache. (d) The use of pipelining in a processor to improve efficiency.

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		<p>(e) Von Neumann, Harvard and contemporary processor architecture.</p> <p>1.1.2 Types of processor</p> <p>(a) The differences between and uses of CISC and RISC processors. (b) GPUs and their uses (including those not related to graphics). (c) Multicore and Parallel systems.</p> <p>1.1.3 Input, output and storage</p> <p>(a) How different input, output and storage devices can be applied to the solution of different problems. (b) The uses of magnetic, flash and optical storage devices. (c) RAM and ROM. (d) Virtual storage.</p> <p>1.3 Exchanging data</p> <p>1.3.1 Compression, Encryption and Hashing</p> <p>(a) Lossy vs Lossless compression. (b) Run length encoding and dictionary coding for lossless compression. (c) Symmetric and asymmetric encryption. (d) Different uses of hashing.</p> <p>1.3.2 Databases</p> <p>(a) Relational database, flat file, primary key, foreign key, secondary key, entity relationship modelling, normalisation and indexing. (b) Methods of capturing, selecting, managing and exchanging data. (c) Normalisation to 3NF. (d) SQL – Interpret and modify. (e) Referential integrity. (f) Transaction processing, ACID (Atomicity, Consistency, Isolation, Durability), record locking and redundancy.</p> <p>1.4 Data types, data structures and algorithms</p> <p>1.4.2 Data Structures</p> <p>(a) Arrays (of up to 3 dimensions), records, lists, tuples. (b) The following structures to store data: linked-list, graph (directed and undirected), stack, queue, tree, binary search tree, hash table. (c) How to create, traverse, add data to and remove data from the data structures mentioned above.</p> <p>1.4.3 Boolean Algebra</p> <p>(a) Define problems using Boolean logic. (b) Manipulate Boolean expressions, including the use of Karnaugh maps to simplify Boolean expressions.</p>

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		<p>(c) Use the following rules to derive or simplify statements in Boolean algebra: De Morgan's Laws, distribution, association, commutation, double negation.</p> <p>(d) Using logic gate diagrams and truth tables.</p> <p>(e) The logic associated with D type flip flops, half and full adders.</p> <p>Paper 2- Programming and algorithms</p> <p>1.2.4 Types of Programming Language</p> <ul style="list-style-type: none"> • Assembly language (including following and writing simple programs with Little Man Computer instruction set) • Object Orientated languages with an understanding of classes, objects, attributes, methods, inheritance, encapsulations and polymorphism. <p>1.4.1 Data Types</p> <ul style="list-style-type: none"> • Use of sign and magnitude and two's complement to represent negative numbers in binary. • Convert positive integers between binary, hexadecimal, and denary • Representation and normalisation of floating-point numbers in binary. <p>2.2.1 Programming techniques</p> <ul style="list-style-type: none"> • Programming constructs: sequence, iteration, and selection • Recursion, and how it can be used and compared to an iterative approach. • Global and local variables • Modularity, functions, and procedures. <p>2.3.1 Algorithm</p> <ul style="list-style-type: none"> • Analysis and design of algorithms for a given situations • The suitability of different algorithms for a given task and data set, in terms of execution time and space • Measure and methods to determine the efficiency of different algorithms, Big O notation (constant, linear, polynomial, exponential, and logarithmic complexity) • Search and sort algorithms (Linear and binary search, bubble sort, insertion sort, merge sort, and quick sort)
Economics	<p>Paper 1, Theme 1</p> <p>Microeconomics 1 hour 20 minutes. 56 marks in total</p> <p>This will consist of four short answer questions worth 4 marks each and</p>	<p>Paper 1 topics:</p> <ul style="list-style-type: none"> • Theme 1: Markets – how they work: • Opportunity Cost • Types of economy, e.g. free market and command • Sustainability • S and D diagram analysis • Factors affecting S and D in context!

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	<p>a structured data response questions worth 40 marks</p> <p>Paper 2, Theme 2</p> <p>Macroeconomics 1 hour 15 minutes. 50 marks in total</p> <p>This will consist of four short answer questions worth 4 marks each and a structured data response questions worth 34 marks in total.</p> <p>Total marks for the mock exam = 106 marks</p>	<ul style="list-style-type: none"> • Consumer and producer surplus without necessarily being asked a specific question • Elasticity – PES and PED. An understanding of their significance and factors that may influence their respective values • YED and its significance • Indirect taxation and subsidy diagrams <p>Theme 1: Market Failure:</p> <ul style="list-style-type: none"> • Consumer behaviour and asymmetric information • Maximum and minimum pricing in context <p>Paper 2 topics</p> <p>Theme 2: The UK economy</p> <ul style="list-style-type: none"> • The multiplier effect • Aggregate Supply • Aggregate Demand • AS/AD diagrammatic analysis • Monetary policy (interest rates) • GDP growth • Inflation • Trade/balance of payments • Investment • Supply side policies/productivity
English Literature	<p>Paper 3 – Section A Poetry Post 2000 and Unseen</p> <p>1 hour 15 minutes</p>	<p>Paper 3 - Section A:</p> <p>You will need to compare a poem we have studied to an unseen poem, You will have a choice of two questions. You need to answer ONE. Each will name a different post 2000 poem and a different theme or idea</p> <p>From the Post-2000 poems, you should revise the following:</p> <ul style="list-style-type: none"> • Material • Chainsaw Versus the Pampas Grass • Effects • On Her Blindness <p>You will compare one of these with the unseen.</p> <p>You will have the unseen poem and the post -2000 poems printed in a Source Booklet. The question will be set up like this Read the poem _____ of the source booklet and reread the anthology poem _____ Compare the methods both poets use to explore.....</p> <p>Use this excellent youtube channel link to revise over the Post 2000 poems</p> <p>https://www.youtube.com/watch?v=81SZwrDNe5U</p>

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French	<p>Paper 1 - listening, reading, translation (1h45)</p> <p>Paper 3 – speaking (25 mins per student)</p>	<p>Paper 1 – The listening and reading questions will be on the 6 year 12 topics (theme 1 and theme 2), the translation is French to English</p> <p>Paper 3 will consist of:</p> <ul style="list-style-type: none"> • Part 1 - students answer questions on the topics studied. They will be given a card with 2 statements to choose from. They will have 5 minutes to prepare some answers on the card. • Part 2 – Research and presentation. Students present their finding about a topic of their choice, they will then be a conversation about those findings. <p>All the information about how to prepare for the speaking examination is on OneNote Speaking (Web view)</p>
Geography	<p>Paper 1 – Physical Geography (90 mins)</p> <p>Paper 2 – Human Geography (90 mins)</p>	<p>Paper 1 – Physical Geography</p> <p>Hazards - The concept of a geographical hazard, plate tectonics, volcanic hazards, storm hazards, fires in nature, multi hazardous locations, UK hazards.</p> <p>Coastal Systems and Landscapes – Coasts as natural systems, coastal landscape development, systems and processes, coastal management.</p> <p>Paper 2 – Human Geography</p> <p>Contemporary Urban Environments – Urbanisation, urban forms, social and economic issues associated with urbanisation, urban climate, urban waste and disposal, contemporary urban environmental challenges, sustainable urban development.</p> <p>Changing Places – The nature and importance of places, relationships in places, connections in places, meaning of places, representation of places.</p>
Health and Social Care HS1	<p>Unit 2 exam - Friday 20th May - 1hr 15mins</p> <p>Unit 1 exam - Wednesday 25th May – 1hour</p>	<p>Unit 2 content</p> <p>A1 The roles of people who work in health and social care settings Understand the roles of people who work in health and social care settings</p> <p>A2 The responsibilities of people who work in health and social care settings</p> <p>Understand the day-to-day responsibilities of people who work in health and social care settings</p> <p>A3 Specific responsibilities of people who work in health and social care settings Applying care values and principles.</p> <ul style="list-style-type: none"> • Promoting the anti-discriminatory practice • Empowering individuals

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		<ul style="list-style-type: none"> Ensuring safety – how people who work in health and social care ensure safety for individuals and staff t Information management and communication - ways of promoting effective communication and ensuring confidentiality <p>Unit 1 content</p> <ul style="list-style-type: none"> A Human growth and development through the life stages (All) B Factors affecting human growth and development (B1,B2,B3,B4, B5)
History	<p>Paper 1 Unit 1K The making of a Superpower, 1865-1975</p> <p>Paper 2: Unit 2S: The Making of Modern Britain, 1951-2007</p> <p>Both 1 hour 45 mins long.</p>	<p>Paper 1: Part One: From Civil War to World War, 1865-1920 (content covered by exam date)</p> <p>Paper 2: Part One: Building a New Britain, 1951-1979 (content covered by exam date)</p>
Law	<p>Paper 1 Legal System and Criminal Law</p> <p>1 hour 30 minutes</p> <p>60 Marks</p> <p>1 x 8 Mark</p> <p>1 x 12 Mark</p> <p>1 x 20 Mark Scenario</p> <p>1 x 20 Mark Essay</p>	<p>Legal System Topics</p> <p>The Judiciary</p> <ul style="list-style-type: none"> The role of inferior and superior judges Evaluation of the judiciary <p>Access to Justice</p> <ul style="list-style-type: none"> Civil and Criminal Funding Evaluation of access to justice <p>Criminal Law Topics</p> <p>Fatal Offences</p> <ul style="list-style-type: none"> Diminished responsibility Loss of control <p>Property Offences</p> <ul style="list-style-type: none"> Theft <p>Evaluation of Non-fatal Offences</p>
Mathematics	<p>Paper 1 Pure and Mechanics 1 hour 30 minutes. 70 marks</p>	<p>Pure Content</p> <p>Proof</p> <p>Inequalities</p> <p>Intersections of lines</p> <p>Sine and cosine rules</p> <p>Maximum and minimum points</p> <p>Further integration</p> <p>Vectors</p> <p>Linear and exponential modelling</p>

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	<p align="center">Paper 2 Pure and Statistics 1 hour 30 minutes 70 marks</p>	<p>Mechanics Content Constant acceleration formula Forces and connected objects Variable acceleration</p> <p>Pure Content Circles Binomial expansion Trig functions Gradient functions Further integration Vectors Logarithmic modelling</p> <p>Statistics Content Sampling Calculating mean and standard deviation Determining outliers Interpreting grouped data Bivariate data Probability distributions Binomial distribution</p>
Media Studies	<p align="center">1 hr 45 mins</p> <p align="center">Comp 1</p>	<ul style="list-style-type: none"> • Music Video unseen representation question – either Riptide of Formation . • Video Games - Audience • Film industry
Physical Education	<p>2 x 90 minute papers</p> <p>Paper 1 (90 minutes) on paper 1 content</p> <p>Paper 2 (90 minutes split into 2 x 45 minute papers)</p> <p>45 minutes on paper 2 Content</p> <p>45 minutes on paper 3 content</p>	<p>Paper 1 content: Exercise Physiology 90 marks</p> <ul style="list-style-type: none"> • Joints, Movements and muscles (analyses of movement) • Types of contraction (motor units, muscle fibres) • Regulation of heart (neural, hormonal and intrinsic) • Vascular Shunt • Venous return • Mechanics of breathing • Regulation of breathing (neural) • Energy Systems & ATP resynthesis (ATP-PC/LA/Aerobic) • Energy continuum & recovery • Exercise at Altitude • Exercise in heat <p>Paper 2 content: There will be a range of questions sizes 2/4/5/ markers and a 10 mark question. Exam will cover Year 12 content so far:</p> <ul style="list-style-type: none"> • Stages of learning • Classification of skills • Practice methods • Transfer • Memory • Learning theories • Guidance and feedback

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		<ul style="list-style-type: none"> • Personality • Aggression • Arousal and Anxiety • Stress Management • Social Facilitation • Attitudes <p>Paper 3 content: 3.1 Sport in Society There will be a range of questions sizes 2/4/5/ markers and a 10 mark question. Exam will cover Year 12 content so far: Characteristics of and participation in sport through the eras:</p> <ul style="list-style-type: none"> • Pre-industrial Britian • Post 1850 industrial Britain • Public schools • 20th century • 21st century (including globalisation)
Physics	<p>Paper 1 1 Hour 30mins</p> <p>Paper 2 1 Hour 30mins</p>	<p>Paper 1 70 marks of short and long answer questions split by topic covering Y12 content.</p> <p>Paper 2 Section A: 20 marks of short and long answer questions on practical skills and data analysis</p> <p>Section B: 20 marks of short and long answer questions from across all areas of Y12 content</p> <p>Section C: 30 multiple choice questions</p>
Psychology	<p>Paper 1 Foundations in psychology 1 hour 30 minutes</p>	<p>Cognitive</p> <ul style="list-style-type: none"> • 4 models of memory • Baddeley and Sebastian Hernandez-Gil's studies • Methodology • key issue and practical investigation <p>Social</p> <ul style="list-style-type: none"> • explanations of obedience and prejudice • dispositional and situational factors that impact obedience and prejudice • Sherif • Milgram (plus variations) and Burger's studies • Methodology • key issue and practical investigation <p>Biopsychology</p> <ul style="list-style-type: none"> • Neurons • action potentials • synaptic transmission • effect of recreational drugs on CNS

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		<ul style="list-style-type: none"> • biological explanations of aggression (evolution, neural, hormonal) • Freud's explanation of aggression • Raine's study and Brengden's twin study • brain scans • correlational research and twin and adoption studies • key issue and practical investigation <p>Students have detailed checklists for each topic which outline the statistical tests and research methods for each topic</p>
Religious Education	<p>Paper 1 Philosophy & Christianity 1 hour 30 minutes</p> <p>Paper 2: Ethics & Christianity 1 hour 30 minutes</p>	<p>Paper 1: Philosophy Part: Pupils will complete an A01 and A02. There will be a choice of three questions from theme 1.</p> <p>Christianity Part: Pupils will be asked to answer an A01. There will be a choice of 2 questions from theme 2.</p> <p>Paper 2: Ethics Part: A01 & A02 and there will be a choice of 2 questions from theme 2.</p> <p>Christianity Part: Pupils will be asked to answer an A01. There will be a choice of 2 questions from Theme 1.</p>
Sociology	<p>Paper 1 60 marks 2 x 45 minute sessions</p> <p>Paper 2 30 marks 1 x 45 minute session</p>	<p>Paper 1 Topics</p> <ul style="list-style-type: none"> • Ethnic differences in educational achievement • gender differences in subject choice • parental choice and pupils' experiences of education • the role of education in transmitting ideas and values • the strengths and limitations of field experiments • teacher labelling • using documents in sociological research <p>Paper 2 Topics</p> <ul style="list-style-type: none"> • Changing gender roles • Childhood • theoretical explanations of the role of the family
Sports Technical	<p>Unit 4 – Working Safely in Sport</p> <p>1 hour 30 minutes (mock exam will take place after Unit 3 – exam)</p>	<p>The paper will cover the following topics:</p> <ul style="list-style-type: none"> • Types of emergencies, types of environments, different roles and responsibilities involved in dealing with emergencies. • Emergency procedures, health and safety legislations, duty of care. • Typical roles of individuals responsible for health and safety in a sport, exercise, health or leisure organisations. • Types of security procedures that may apply in a sport, exercise, health and leisure setting. • Key health and safety documents that are relevant in sport, exercise, health and leisure.

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		<ul style="list-style-type: none"> • Possible hazards in sport, exercise, health and leisure, risk assessments and ways to minimise risks, roles and responsibilities in risk management. • The Requirements of the Health and Safety (First Aid) Regulations 1981, the role and responsibilities of the first aider, Emergency First Aid at Work, minimum requirements of a first aid box • Know how to safeguard children and vulnerable adults in sport, exercise, health and leisure.