December 2022 Mock Exam topics list

Subject	Topics
Computer Science	Base Number Schemes Binary, Hexadecimal and Denary arithmetic/logical shifts/two's compliment ASCII and Unicode High and Low Level Languages Program Coding Errors Algorithms, Flowcharts, Pseudo Code and Trace Tables Sequence, Selection, Iteration and Sub Programs Compilers and Interpreters Operating Systems and Peripherals CPU, Buses, Clock and FDE Cycles Embedded Systems, Compilers and Interpreters Secondary Storage Network Topologies, Communication Protocols & IP Addresses TCP/IP and Packet Structures File Conversion, Compression and Transmission Rate Expressions Utility Software Issues and Impact for cyberattacks, intellectual property rights, e-waste Computational thinking – decomposition, abstraction, pattern recognition and algorithms
English	**Language** Students will get two unseen, non-fiction texts. One will be a 19th century text and one will be modern. They will be asked a series of questions about these texts. This section is worth 40 marks and students should spend about 1 hr on this. For section B, students will need to write a non-fiction text giving their point of view on a topic. This text could be a speech, leaflet, letter or article and the format will be specified in the question. This is also worth 40 marks and students should spend 45 mins on it. **Literature** An Inspector Calls Power and Conflict poetry Unseen poetry
French	**Theme 1** Me, my family and friends Technology in everyday life Free time activities Customs and festivals **Theme 2** Home, town and region Social issues Global issues Travel and tourism **Theme 3**

	My studies Life at school and college
Geography	**Paper 1:** UK landscapes Rivers Coasts Weather and Climate **Paper 2:** Changing cities Development Resources
History	**Saxons and Normans** Saxon England The Battle of Hastings How did William get and keep control? Norman England **Russia** Life under the Tsar The Provisional Government October Revolution Stalin's Russia
Maths	For foundation paper, click here For higher paper, click here
Music	Bach Badinerie Set Work Romantic orchestral music – identification of devices, musical features Musicals – musical features Romantic piano chamber music – including dictation Film Music – spy film Extended response – film music – chase scene Toto Africa Set Work Pop music – musical features
Physical Education	Paper 1: - Structure and function of the skeletal system - Structure and function of the muscular system - Movement analysis - CV and Respiratory systems - Effects of exercise on body systems - Components of fitness - Principles of training Paper 2: - Engagement patterns - Commercialisation - Ethical and sociocultural issues - Sports Psychology - Health fitness and well being

Religious Studies	Marriage and the Family Matters of Life and Death Jewish Beliefs Crime and Punishment
Science (please note – the topics will be the same for both Triple and Combined Science)	**Biology** Topics 1 – 4: Cell Biology; Organisation; Infection and response; Bioenergetics **Chemistry** Topics 1 – 5: Atomic structure and the periodic table; Bonding, structure and the properties of matter; Quantitative chemistry; Chemical changes; Energy changes **Physics** Topics 1 – 4: Energy; Electricity; Particle model of matter; Atomic structure
Spanish	**Lifestyle** Health Relationships and Choices **Leisure** Free time and the media Holidays **Home and Environment** Home and Local Area Environment **Work and Education** Jobs School