

Computer Science Mock Exam - Revision Topics

- Paper 1 Computer Systems (1hr 30mins)

Topic Title	Areas to revise	Resources \subjects\@Computing\GCSE Computing Year 10\Paper 1- Computer Systems _Revision Resources
1.1 – Systems Architecture	<ul style="list-style-type: none"> • The purpose of the CPU • The Von Neumann architecture • Common CPU components and their function • How common characteristics of CPUs affect their performance • Embedded systems 	<p>Workbook SLR 1.1</p> <p>Test - SLR 1.1</p>
1.2 – Memory	<ul style="list-style-type: none"> • The difference between RAM and ROM. • The purpose of ROM in a computer system. • The purpose of RAM in a computer system. • The need for virtual memory. • Flash memory. 	<p>Workbook SLR 1.2</p> <p>Test - SLR 1.2</p>
1.3 – Storage	<ul style="list-style-type: none"> • The need for secondary storage. • Data capacity and calculation of data capacity requirements. • Common types of storage. • Suitable storage devices and storage media for a given application, advantages and disadvantages of these, using the characteristics: capacity, speed, portability, durability, reliability and cost. 	<p>Workbook SLR 1.3</p> <p>Test - SLR 1.3</p>
1.4 – Wired & Wireless Networks	<ul style="list-style-type: none"> • Types of networks • Factors that affect the 	<p>Workbook SLR 1.4</p> <p>Test - SLR 1.4</p>

	<p>performance of networks.</p> <ul style="list-style-type: none"> • The different roles of computers in a client-server and peer-to-peer network. • The hardware needed to connect stand-alone computers into a Local Area Network. • The internet as a worldwide collection of computer networks. • The concept of virtual networks. 	
1.5 – Network Topologies, Protocols & Layers	<ul style="list-style-type: none"> • Star and mesh network topologies. • Wi-Fi. • Ethernet. • The uses of IP addressing, MAC addressing, and protocols. • The concept of layers. • Packet switching. 	<p>Workbook SLR 1.5</p> <p>Test - SLR 1.5</p>
1.6 – Systems security	<ul style="list-style-type: none"> • Forms of attack. • Threats posed to networks. • Identifying and preventing vulnerabilities. 	<p>Workbook SLR 1.6</p> <p>Test - SLR 1.6</p>
1.7 – Systems Software &	<ul style="list-style-type: none"> • The purpose and functionality of systems software. • Operating systems. • Utility system software. 	<p>Workbook SLR 1.7</p> <p>Test - SLR 1.7</p>
1.8 – Ethical, Legal, Cultural & Environmental Concerns	<ul style="list-style-type: none"> • How to investigate and discuss Computer Science technologies. • How key stakeholders are affected by technologies. • Environmental impact of Computer Science. • Cultural implications of Computer Science. • Open source vs proprietary software. • Legislation relevant to Computer Science. 	<p>Workbook SLR 1.8</p> <p>Test - SLR 1.8</p>