GCSE Computer Science J277/01 – Mock 2 Revision List

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| **1.1 System Architecture** | **Do you know it?** | **Revision links** |
| Common CPU components and their function:* ALU (Arithmetic Logic Unit)
* CU (Control Unit)
* Cache
* Registers
 |  | <https://youtu.be/hk9LPXzYeT0?feature=shared>  |
| The function of the CPU as fetch and execute instructions stored in memory |  | <https://youtu.be/7Up7DIPkTzo?feature=shared>  |
| **1.2 Memory and storage** | **Do you know it?** |  |
| The purpose of ROM in a computer system |  | [**https://youtu.be/Q2pzT6oYPWg?feature=shared**](https://youtu.be/Q2pzT6oYPWg?feature=shared) |
| The purpose of RAM in a computer system |  | [**https://youtu.be/Q2pzT6oYPWg?feature=shared**](https://youtu.be/Q2pzT6oYPWg?feature=shared) |
| The need for secondary storage |  | [**https://youtu.be/FNwA-h\_tfPo?feature=shared**](https://youtu.be/FNwA-h_tfPo?feature=shared) |
| Numbers:* Explain overflow errors which may occur
* How to convert from binary integers to their hexadecimal equivalents and vice versa
 |  | [**https://youtu.be/3K\_Nw\_pDzUQ?feature=shared**](https://youtu.be/3K_Nw_pDzUQ?feature=shared) |
| Characters:* The term ‘character-set’
 |  | [**https://youtu.be/9oYV4JvSsok?feature=shared**](https://youtu.be/9oYV4JvSsok?feature=shared) |
| Images:* How an image is represented as a series of pixels represented in binary
* Metadata included in the file
* The effect of colour depth and resolution on:
	+ The quality of the image and size of an image file
 |  | [**https://youtu.be/6EfxuAOKZKc?feature=shared**](https://youtu.be/6EfxuAOKZKc?feature=shared) |
| **1.3 Computer networks, connections and protocols** | **Do you know it?** |  |
| Types of networks:* LAN (Local Area Network)
 |  | [**https://youtu.be/KeN3H8\_Jhbc?feature=shared**](https://youtu.be/KeN3H8_Jhbc?feature=shared) |
| Standards |  | [**https://youtu.be/\_xwKBxDs7aY?feature=shared**](https://youtu.be/_xwKBxDs7aY?feature=shared) |
| Common protocols including:* TCP/IP (Transmission Control Protocol/Internet Protocol)
* HTTP (Hyper Text Transfer Protocol)
* HTTPS (Hyper Text Transfer Protocol Secure)
* FTP (File Transfer Protocol)
* POP (Post Office Protocol)
* IMAP (Internet Message Access Protocol)
* SMTP (Simple Mail Transfer Protocol)
 |  | [**https://youtu.be/ncGIs1Wnxn8?feature=shared**](https://youtu.be/ncGIs1Wnxn8?feature=shared) |
| The concept of layers |  | [**https://youtu.be/S6Kwx5ZJpxg?feature=shared**](https://youtu.be/S6Kwx5ZJpxg?feature=shared) |
| **1.4 Network security** | **Do you know it?** |  |
| Common prevention methods:* Penetration testing
* Anti-malware software
* Firewalls
* User access levels
* Passwords
* Encryption
* Physical security.
 |  | [**https://youtu.be/XJEjQN-CEDk?feature=shared**](https://youtu.be/XJEjQN-CEDk?feature=shared) |