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) |