

The KS4 curriculum: OCR Computer Science (J277)

Paper 1 (50%): Computer Systems (Written Paper - 90 minutes)

Paper 2 (50%): Computational Thinking, algorithms & programming (Written Paper - 90 minutes)



Paper 2 Exam Technique

Paper 1 Exam Technique

Personalised Exam Prep



Programming Language



Source Code - High Level



Machine Code - Low Level



Compilers



Interpreters



System Software



User Interface



Memory Management & Multitasking



Peripheral Management & Drivers



User Management

1.6 Ethics

2.5 Translators

2.4 Computational Thinking

1.5 System Security

Year 11



Legal Considerations



Cultural Issues



Environmental Issues



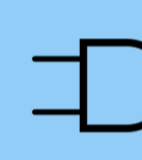
Privacy Issues



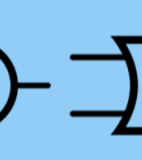
Boolean Logic



Logic Operations



AND Gate



OR Gate



NOT Gate



Programming Project



LAN (Local Area Network)



WAN (Wide Area Network)



The Internet



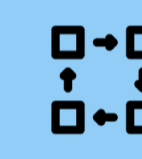
The Cloud



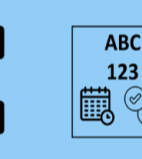
Web Servers and Clients



Selection



Iteration



Data Types



SQL (Structured Query Language)



Sub Programs

1.3 Networks

1.4 Network Security

2.2 Programming Techniques

2.1 Algorithms



Threats: Malware



Threats: Social Engineering



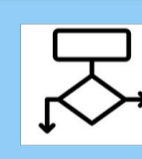
Threats: Denial of Service Attacks



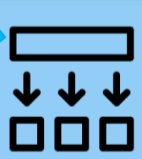
Threats: Brute-Force Attacks



Threats: SQL Injection



Algorithm



Decomposition



Algorithmic Thinking



Input -> Process -> Output



Structure Diagrams

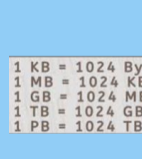
1.2 Data Rep.

1.2 Memory & Storage

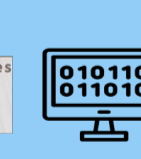
2.2 Programming Techniques

1.1 Computer Architecture

Year 10



Units of Data Storage



Binary



Binary Addition



Hexadecimal (hex) Numbers



Binary shifts



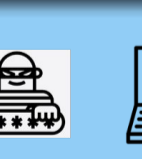
Threats: Malware



Threats: Social Engineering



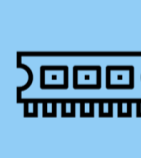
Threats: Denial of Service Attacks



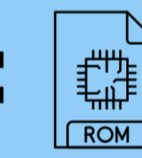
Threats: Brute-Force Attacks



Threats: SQL Injection



RAM (Random Access Memory)



ROM (Read Only Memory)



Virtual Memory



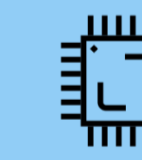
Flash Memory



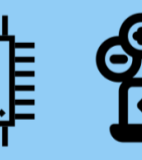
Secondary Storage



CPU - Central Processing Unit



ALU (Arithmetic Logic Unit)



CU (Control Unit)



Cache

Recommended Resources:

- CGP: GCSE OCR Computer Science - Revision & Practice J277
- PG Online - Clear Revise - OCR GCSE Computer Science J277

