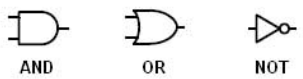
Subject: Computer Science	Topic: Computer Systems	Year Group: 11

Hardware, Operating Systems and Memory

1	1. What is hardware? ▪ Input Devices ▪ Output Devices ▪ Specialist Devices ▪ Assistive Technology Operating system functions - Processor, memory, IO devices, applications and security - Random Access Memory [RAM] - Read Only Memory [ROM] - The difference between RAM & ROM. - Virtual Memory - Preventing the need for VM - Disk thrashing - Flash memory

Boolean Logic

1	- Logic Gates  - Truth tables Truth tables show all possible input combinations of 1s and 0s, and the corresponding outputs. - Logic statements Circuits can be written as logical statements. Operations in brackets should be completed first, just like in Math's.

Secondary Storage and Memory

1	- Common types of storage - Optical Media - Magnetic Hard Drive - Solid State Drives - Suitable storage devices / media for a given application - Advantages / Disadvantages using the following characteristics: - Capacity - Speed - Portability - Durability - Reliability - Cost - Cloud storage **Systems Architecture** - The purpose of the CPU - Von Neumann architecture - Common CPU components and their functions - Function of the CPU as fetch decode and execute - How common characteristics of CPUs affect their performance: - Embedded systems:

Key Vocabulary

1	Bus	A collection of wires that carry data, instructions and addresses between components of the CPU.
2	Embedded Systems	A computer built into another device e.g. Smart TV, dishwashers and microwaves.
3	Hardware	The physical components that make up a computer
4	Software	The program that runs on a computer system