A LEVEL COMPUTER SCIENCE

4 – Operating systems – Systems software (AS / A Level)

UNIT 1

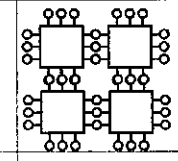
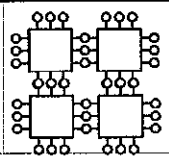
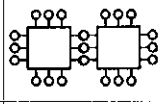
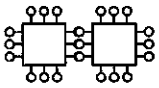
Specification Points / Learning Objectives:

Core text book page ref: 99-107

AS Level	A Level	Specification point description
1.2.1a	1.2.1a	The need for, function and purposes of operating systems
1.2.1b	1.2.1b	Memory management (paging, segmentation and virtual memory)
1.2.1c	1.2.1c	Interrupts, the role of interrupts and Interrupt Service Routines (ISR), role within the fetch decode execute cycle
1.2.1d	1.2.1d	Scheduling: round robin, first come first served, multi-level feedback queues, shortest job first and shortest remaining time
1.2.1e	1.2.1e	Distributed, embedded, multi-tasking, multi-user and real time operating systems
1.2.1f	1.2.1f	BIOS
1.2.1g	1.2.1g	Device drivers
1.2.1h	1.2.1h	Virtual machines, any instance where software is used to take on the function of a machine including executing intermediate code or running an operating system within another

Expectations / Learning Outcomes:

- Terms 36-57 from your **A Level Key Terminology** PowerPoint should be included and underlined.
- You must include a table which clearly shows the advantages & disadvantages of paging vs segmentation.
- You must demonstrate (e.g. via a diagram) how / when an interrupt is checked for during the fetch-decode-execute cycle.
- You must include a comparison of the key features of the various scheduling algorithms.

Grade	TG.	Breadth	Depth	Presentation	Understanding
A/A*		ALL	**LINK / FORMULATE** Create, Generate, Hypothesis, Reflect, Theorise, Consider	 Quad Core	 Quad Core
B/C		MOST	**EXPLAIN / ANALYSE** Apply, Argue, Compare, Contrast, Criticise, Relate, Justify	 Dual Core	 Dual Core
D/E		SOME	**DESCRIBE / IDENTIFY** Name, Follow Simple Procedure, Combine, List, Outline	Single Core	Single Core
U		FEW	Very little depth of understanding shown		

MY ASSESSMENT GRADE IN THIS TOPIC IS:

How To Improve:

My Response Is: (Set yourself specific targets / objectives as to how you will achieve your HTI)

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