

Subject:	Computer Science
Number and length of exam(s):	2 x Exams Paper 1 – Computer Systems (90 Minutes) Paper 2 – Algorithms and Programming (90 Minutes)
Revision Topics	<p>Paper 1 – Computer Systems</p> <ul style="list-style-type: none"> • 1.1 – Systems Architecture <ul style="list-style-type: none"> ○ Von Neumann architecture (MAR, MDR, PC, ACC, ALU, CU, Cache) ○ FDE Cycle & Factors that affect performance of CPUs (Three C's) ○ Embedded systems • 1.2 Memory <ul style="list-style-type: none"> ○ RAM/ROM/Virtual/Flash Memory • 1.3 Storage <ul style="list-style-type: none"> ○ Secondary Storage (Optical/Magnetic/Solid-state) Inc. characteristics • 1.4 Wired and wireless networks <ul style="list-style-type: none"> ○ LAN/WAN & Client-server vs Peer to Peer ○ Factors that affect performance of networks ○ Network hardware and the Internet (DNS, Hosting, the 'Cloud', virtual networks) • 1.5 Network topologies, protocols and layers <ul style="list-style-type: none"> ○ Topologies, WiFi/Ethernet, IP/MAC addressing, Layers/Packet-switching ○ Protocols (TCP/IP/HTTPS/FTP/POP/IMAP/SMTP) <p>Paper 2 – Algorithms and Programming</p> <ul style="list-style-type: none"> • 2.1 – Algorithms <ul style="list-style-type: none"> ○ Abstraction/decomposition/algorithmic thinking ○ Searching algorithms (linear/binary) & Sorting algorithms (bubble/insertion/merge) ○ Producing algorithms using pseudocode/flowcharts • 2.2 – Programming techniques <ul style="list-style-type: none"> ○ Variables/constants/inputs/outputs/assignment/Sequence/selection/Iteration ○ String manipulation/Data types • 2.4 – Computational Logic <ul style="list-style-type: none"> ○ Logic diagrams and truth tables (AND, OR and NOT) and MOD/DIV • 2.6 – Data Representation <ul style="list-style-type: none"> ○ Denary/Binary/Hex Conversions, Binary Addition, Overflows & Binary Shifts ○ Representing characters, images and sound & Compression
Where to access resources?	<ul style="list-style-type: none"> • Class exercise books • Key Assessments/Quizzes folder • Reference drive in school/Microsoft Teams • YouTube – CraigAndDave – GCSE OCR Playlist
How to access help / support	<ul style="list-style-type: none"> • Class exercise books • Feedback given on past assessments (see corrections) • Teacher – Email - rifaim@turton.uk.com or contact on Microsoft Teams • YouTube tutorials for coding help and theory content.
Hints or tips	<ul style="list-style-type: none"> • When asked to write an algorithm you may use either pseudocode/Python code or even draw a flowchart. • Use correct technical language (see past paper questions attempted and mark schemes seen in lesson resources) • ALWAYS attempt the question as the marks are spread depending on various elements of a program e.g. input/variables/iteration/output.