EDEXCEL GCSE Computer Science

Component:	Assessment:	Topic areas:
PAPER 1: Principles of Computer Science	**50%** **External exam** **75 marks** **1 hour 30 minutes** **Wednesday 13th May 2026** **1:00pm**	**Topic 1: Computational Thinking** 1.1 Decomposition and abstraction 1.2 Algorithms – use of flowcharts and pseudocode; Binary and linear search 1.3 Truth tables – use of logical operators AND, OR, NOT **Topic 2: Data** 2.1 Binary – to represent data, conversion, addition, overflow, hexadecimal 2.2 Data representation – 7-bit ASCII, pixels/images, sound 2.3 Data storage and compression – measurements, lossy/lossless compression **Topic 3: Computers** 3.1 Hardware – von Neumann, memory (RAM), CPU registers, FDE cycle, secondary storage, embedded systems 3.2 Software – Operating system, utility software, vulnerabilities 3.3 Programming languages – low level and high level; compiler and machine code **Topic 4: Networks** 4.1 Networks – LAN/WAN, protocols, 4-layer model, topologies, hardware E.g. router 4.2 Network security – Identify vulnerabilities, methods of protection **Topic 5: Issues and impact** 5.1 Environmental - energy consumption, manufacture, replacement cycle, disposal 5.2 Ethical and legal - (privacy, ownership, consent, misuse, data protection 5.3 Cybersecurity – malware, social engineering, exploiting vulnerabilities.
PAPER 2: Application of Computational Thinking	**50%** **External exam** **75 marks** **2 hours** **Tuesday 19th May 2026** **1:00pm**	**Topic 6: Problem solving with programming** 6.1 Develop code • Read/write and analyse programs in a high level language (Python) • Convert algorithms (pseudocode/flowcharts) in to code 6.2 Constructs • Identify constants, variables, initialisation and assignment statements, command sequences, selection, repetition, iteration, data structures, subprograms, parameters, input/output, write programs using these. 6.3 Data types and structures • Use of integer, real, Boolean, char 6.4 Input/output • User input; write to files; use of validation 6.5 Operators • Use of arithmetic and relational operators. 6.6 Subprograms • Use pre-existing (built-in, library) and user-devised subprograms (procedures, functions)

Link to St George's Academy GCSE Computer Science Padlet: GCSE Computer Science

Link to Edexcel GCSE Computer Science website past papers: Computer Science (2020) | Pearson qualifications

Link to SENECA learning: Seneca - Learn 2x Faster

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