Year 11 – Lent Mock Examinations 2023

Subject	Computer Science		
Title/Topic	**Format**	**Length**	**Date / Lesson**
P1 – Computer Systems Part A	Written Paper	45 minutes	Mon 6 March
P1 – Computer Systems Part B	Written Paper	45 minutes	Tue 7 March
P2 – Computational Thinking and Programming Part A	Written Paper	45 minutes	Mon 13 March
P2 – Computational Thinking and Programming Part A	Written Paper	45 minutes	Fri 17 March

In this assessment the topics I will be assessed on are…

Paper 1 – Computer Systems

- File Sizes and Units
- Denary to Binary
- Hexadecimal to denary
- Binary to Hexadecimal
- Parts of the CPU
- RAM and ROM
- Secondary storage devices for a specific purpose
- LAN performance factors
- Web hosting and DNS
- Network Hardware – Ethernet, Routers
- The purpose of encryption
- Physical Security methods and software security
- Common network protocols
- Legal and ethical issues relating to AI and websites
- Computer related laws and their purpose
- Analogue to digital sound conversion
- How sound properties affect file size
- ASCII and other character sets
- Images and metadata
- Compression

Paper 2 – Computational Thinking, Algorithms and Programming

Part 1 -

- Programming constructs – Sequence, selection, iteration
- Assigning values to a variable
- Computational thinking – Decomposition and abstraction
- Boolean logic – drawing a circuit
- The purpose of truth tables and how to construct them
- Flowcharts – Draw a flowchart that has inputs, decision, output
- Identify inputs for a given problem

- What is the purpose "Casting"
- Completing a trace table for an algorithm
- Merge sort performed on a list
- Steps to a binary search
- Steps to a Linear Search
- Maintaining our code
- Arithmetic operators
- Types of translators – assemblers, compilers and interpreters
- Writing a program that carries out calculations in a condition controlled-loop

Part 2 –

- Choosing variable data types
- Writing an SQL command that uses SELECT FROM WHERE
- Write a program that performs validation on some variables
- Completing a test plan for different test data
- Write a function that takes parameters, performs calculations and returns a final answer.
- Using a function in a program
- Fixing logical errors
- Write a program that carries out calculations in a loop

What should I do to revise and prepare for this assessment?

To prepare for this assessment:

1. Watch the GCSE Pod videos for the topics above that you feel least confident about
2. Make notes about the key points highlighted in the video.
3. Re-read sections of your homework booklet (thick booklets for Paper 1 and 2)
4. Complete the practice questions from the revision packs handed out in class.
5. Ask Mr Jackson for additional help and advice if you are struggling with any topics.

What useful websites/resources could I use to help me prepare?

www.gcsepod.com
www.youtube.com (Search "craigndave gcse computer science")
www.isaaccomputerscience.org