# A Level Computer Science Y12 Exam Revision Timetable (2025)

**Student Name:**

We will be asking you to revise different topics each week using weekly revision activities via a Showbie class to be completed as homework and during revision lessons. Ask your teacher for the class code.

**Resources**

- Smart Revise (Ask for your enrolment key)
- Isaac Computing and Ada computing website
- Quizlet https://quizlet.com/join/6mPgbfnVY

**Exam**

You will have 2 exam papers. They will each be 1 hour 30 minutes in length.

| Date | Unit 1 |
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| Week 1 | **Topic 1 Processors and Components (Paper 1)**<br>☐ FDE Cycle<br>☐ CPU performance<br>☐ Types of processors—Von Neumann vs Harvard<br>☐ RISC and CISC<br>☐ Multicore and GPU's<br>☐ Inputs, outputs and storage<br>☐ RAM and ROM |
| Week 2 | **Topic 7 Programming techniques (Paper 2)**<br>☐ Variables vs Constants<br>☐ Programming Constructs (Selection, Sequence, Iteration)<br>☐ Scope of variables (Local vs Global)<br>☐ Data types<br>☐ Modularity (Function vs Procedure)<br>☐ Passing by value vs passing by reference<br>☐ Arrays<br>☐ Files<br>☐ IDE Tools<br>☐ Type of errors and suitable test data<br>☐ Programming Standards and maintainability |
| Week 3 | **Topic 2: Types of software and operating systems (Paper 1)**<br>☐ Types of Application software<br>☐ Functions of an operating system<br>☐ Memory Management<br>☐ Scheduling<br>☐ Interrupts<br>☐ Device Drivers and BIOS<br>☐ Virtual Machines<br>☐ Utilities<br>☐ Open source vs closed source. |

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| Week 4 | **Topic 4 Data Types (Paper 1)**<br>☐ Unsigned binary<br>☐ Hexadecimal Numbers<br>☐ Negative numbers – sign and magnitude and 2's complement<br>☐ ASCII and UNICODE<br>☐ Binary arithmetic – addition and subtraction<br>☐ Floating point arithmetic<br>☐ Normalisation of Floating Point |
| Week 5 | **Topic 6 Elements of computational thinking (Paper 2)**<br>☐ Thinking abstractly<br>☐ Thinking ahead<br>☐ Thinking procedurally<br>☐ Thinking logically<br>☐ Thinking concurrently<br><br>**Topic 3 Exchanging data (Paper 1)**<br>☐ How data is exchanged between different systems<br>☐ Compression, Encryption and Hashing<br>☐ Run length encoding and dictionary coding for lossless compression.<br>☐ Symmetric and asymmetric encryption<br>☐ Different uses of hashing. |
| Week 6 (Half-term) | **Topic 7: OOP (Paper 2)**<br><br>**Topic 2 Assembly code, high level and Translators (Paper 1)**<br>☐ Low level vs high level<br>☐ LMC<br>☐ Modes of address memory<br>How Compliers work |
| Week 7 | **Topic 8 Algorithms (Paper 2)**<br><br>☐ Binary search and linear search.<br>☐ Bubble Sort<br>☐ insertion sort<br>☐ merge sort<br>☐ quick sort<br>☐ BigO<br><br>**Topic 2 Software Development methodologies (Paper 1)**<br>☐ Waterfall lifecycle, agile methodologies, extreme programming, the spiral model and rapid application development.<br>☐ Merits and drawbacks of each methodology |
| Week 8 | **Mock Exam Paper 1** |
| Week 9 | **Mock Exam Paper 2** |