

OCR Computer Science J277

Written Examination - 80 marks, 1hr 30mins

You will sit one paper, which will be **Component 2 only**



Component 2 – Computational thinking, algorithms and programming

2.1 Algorithms

Computational thinking, searching algorithms (linear, binary), sorting algorithms (bubble, insertion and merge),

2.2 Programming fundamentals

Variables, constants, boolean operators (AND, OR, NOT), comparison & arithmetic operators, programming fundamentals: sequence, selection & iteration, the use of data types (integer, real, strings, boolean & casting), random number generation and the use of sub programs.

2.3 Producing robust programs

*Maintainability (commenting, indents, naming conventions, use of sub programs).
Testing – syntax & logic errors, using test data (normal/valid, extreme/boundary & erroneous data)*

2.4 Boolean logic

Logic diagrams using AND (^), OR (v), NOT (¬), truth tables, combining to two levels i.e. NAND, NOR.

2.5 Programming languages and integrated development environments

*Languages – characteristics & purpose of high-level & low-level programming languages, purpose of translators, characteristics of a compiler and interpreter.
The integrated development environment – common tools & facilities (editors, error diagnostics, run-time environment, translators)*

1) Personal Learning Checklist for both Components:

<https://www.blessededward.co.uk/wp-content/uploads/2021/10/PLC-Computer-Science-Yr-11.pdf>

This should be used to identify areas that you're not sure of.

2) Please use the following links to aid revision:

- 1) OCR Past Papers <https://tinyurl.com/y5eksx9b>
- 2) Teach-ICT <https://tinyurl.com/yn9dsekf>
- 3) Low Stakes quizzes <https://tinyurl.com/3hvbczfw>
- 4) Paper 1 and 2 Walkthrough videos:
<https://tinyurl.com/4cjb7rb>
<https://tinyurl.com/3xrrvta>
- 5) Craig n Dave videos about key concepts: <https://tinyurl.com/yc47vuwm>

You should also condense notes using Mind maps and Cornell notes to consolidate learning. Teach-ICT.com would be the website we suggest you use.

Username: **wr5 2xd** Password: *use details from your planner.*