MODULE R · OCR J277 2A, 3A, 3B, 3D, 3K · CAMBRIDGE 0478 SECTIONS 2 AND 4

Exam technique

How the papers work, **timing**, **command words**, the **OCR 8-mark question** and the **Cambridge 15-mark scenario**. **OCR J277: cards 01, 03 and 04. Cambridge 0478: cards 02, 03 and 06.** There is no R5. OCR J277 v3.1 and Cambridge 0478 2026-2028 (v6), as checked in November 2026.

01 OCR J277 papers (R1) GCSE only

Paper 1 J277/01 Computer systems: 1 h 30 min, 80 marks, 50%. Topics 1.1-1.6. Multiple choice, short and medium answers, one 8-mark extended response (*).

Paper 2 J277/02: 1 h 30 min, 80 marks, 50%. Topics 2.1-2.5.

Section A 50 marks, concepts. Any form: pseudocode, flowchart, bullets, English, ERL or a high-level language. Logic, not syntax.

Section B 30 marks, Practical Programming. Write/refine: ERL or a high-level language only; pseudocode, English, bullets = 0. Minor syntax errors not penalised.

Both papers No calculator; all mandatory; same May/June series. Grade from total /160. Retake = both papers. Code in papers is in ERL.

Timing 90 ÷ 80 = 1.125 min per mark: Section A about 56 min, Section B about 34 min, 8-mark question 9 min.

02 Cambridge 0478 papers (R2) IGCSE only

Paper 1 Computer Systems: 1 h 45 min, 75 marks, 50%. Short-answer and structured, Topics 1-6.

Paper 2 Algorithms, Programming and Logic: 1 h 45 min, 75 marks, 50%. Topics 7-10. Last question: 15-mark scenario, about 30 min.

Code Coding answers in pseudocode; program code = 0. Except the 15-mark scenario: pseudocode, Python, Visual Basic or Java (any other = 0).

Syntax Not examined; logic matters more. Use the section 4 flowchart and logic gate symbols.

Both papers All compulsory, answered on the paper, no calculators. AO1-AO3; grades A* to G.

Timing Paper 1: 105 ÷ 75 = 1.4 min per mark (6 marks about 8 min). Scenario: 30 min for 15 = 2 min per mark.

From 2029 New syllabus changes Paper 2 (Python, scenario in parts). Check your exam year.

03 Command words (R3) · both boards

State, Identify Short answer: a name, value or feature. No explanation.

Define The precise meaning of a term.

Describe Main features, or what happens. No reasons needed.

Explain Reasons or causes: why or how, linked with "because" or "so".

Compare Similarities and/or differences; mention both things in each point.

Evaluate Judge against criteria; reach a conclusion.

Calculate Numerical answer; show your working.

Outline Brief summary of the main points.

03 Command words continued (R3)

Shared 11 on both lists: Calculate, Compare, Define, Describe, Evaluate, Explain, Give, Identify, Outline, Show (that), State.

Discuss GCSE only Balanced review of a range of arguments; clear conclusion supported by evidence.

Justify, Refine GCSE only Justify: valid reasons for an answer or choice. Refine: improve, modify, make more efficient. OCR lists 29 entries in all.

Suggest IGCSE only Apply knowledge where many answers are valid; make proposals.

Demonstrate IGCSE only Show how, or give an example. Cambridge lists 13 words.

Depth test State: "a washing machine controller". Describe: built into a larger device, one dedicated function. Explain: one task, so a small, low-cost processor.

04 The 8-mark question (R4) GCSE only

What One per J277/01, marked (*). Tests a sustained, coherent line of reasoning. Any Paper 1 topic; recently 1.6.1 impacts.

Marking Whole answer in a band, not 1 mark per point. High 6-8, Mid 3-5, Low 1-2, 0 = nothing creditworthy.

Top band Applied to the scenario throughout; both sides weighed; logical structure; supported conclusion.

Strand Point, then explanation (because ...), then impact in context (so ... who, how). Repeat for and against.

Lenses Ethical, legal, cultural, environmental, privacy. Cover every bullet in the question.

Laws Data Protection Act 2018; Computer Misuse Act 1990; Copyright, Designs and Patents Act 1988 (as at November 2026).

Finish A conclusion that follows from your points; a supported middle position is fine.

06 The 15-mark scenario (R6) IGCSE only

What Last question on Paper 2: unseen scenario, write a program. Topics 7-10. About 30 minutes.

Language Pseudocode, Python, Visual Basic or Java. Any other = 0.

Methods Arrays (1D names + 2D data), nested loops, validation in a condition-controlled loop, totalling, counting, average, max/min, output with messages.

Rules Use the given names exactly; prompt every input; message every output; comment the code.

Marking To 2028, best fit: AO2 up to 9 (requirements, techniques, data structures) + AO3 up to 6 (comments, identifiers, logic, accuracy) = 15.

Plan Number the requirements, match each to a method, one commented section each, then tick them off.

Validate `REPEAT ... INPUT Height UNTIL Height >= 0 AND Height <= 50`

01
Read the **command word** first. An Explain point needs a **because** or a **so**.

02
Compare: every point mentions **both** things. **Calculate**: show your working.

03
OCR Section B write/refine: **ERL or a high-level language**. Pseudocode or bullets score 0.

04
0478 scenario: validate in a **loop**, not one IF, and output **every** name that ties for the highest value.