MODULE R EXAM TECHNIQUE · R1

How OCR J277 Paper 1 and Paper 2 are structured: mark scheme

22 marks · OCR J277 specification sections 2a, 3a, 3b, 3i, 3j, 3n

How to use. 1 mark per bullet up to the maximum shown. **/** separates alternative answers. Words in (brackets) are not needed for the mark. Credit any other valid answer that shows the same understanding. This part is about the assessment, not a content point, so the references are to sections of the OCR J277 specification v3.1 (as at November 2026): 2a specification overview, 3a forms of assessment, 3b assessment of Practical Programming skills (Component 2), 3i assessment availability, 3j retaking the qualification, 3n calculating the qualification result. Topic rows in Q3 also give the content point.

QUESTION	ANSWER	MARKS	GUIDANCE
1(a) J277 2a, 3a, 3j	Calculator allowed in Paper 2: False Every question must be answered: True Retake only the lower-scoring paper: False	**3**	1 mark per correct row. 2+ ticks in a row = 0 for that row. Row 1: both papers are non-calculator (2a, 3a). Row 2: all questions are mandatory on both papers (2a, 3a). Row 3: a retake must include all examined components, i.e. both papers (3j).
2(a) J277 2a, 3a, 3b	Paper 1 is worth: 80 (marks) Extended response question: 8(-mark) Section A: 50 (marks) Section B: 30 (marks) Program code in the papers: OCR Exam Reference Language	**5**	1 mark per correct gap, in this order. Correct answer only. Section A and Section B the wrong way round = 0 for both of those gaps. Allow "ERL" / "Exam Reference Language" for the last gap. Do not accept "a high-level language" / "pseudocode" for the last gap: all code given in the papers is in OCR Exam Reference Language (3b). 15 and 75 are distractors (they are not J277 figures).

QUESTION	ANSWER	MARKS	GUIDANCE
3(a) J277 2a; 1.2.4, 2.4.1, 2.5.1, 1.4.2	Binary to hexadecimal: Paper 1 (1.2.4 Data storage) Logic diagram with AND, OR, NOT: Paper 2 (2.4.1 Boolean logic) Compiler vs interpreter: Paper 2 (2.5.1 Languages) Firewall protecting a network: Paper 1 (1.4.2 Identifying and preventing vulnerabilities)	**4**	1 mark per correct row. 2+ ticks in a row = 0 for that row. Paper 1 covers topics 1.1 to 1.6; Paper 2 covers topics 2.1 to 2.5 (2a). Synoptic questions may draw on other topics too (3m), but each of these tasks is taught in the topic shown.
4(a) J277 2a, 3b	Response P (high-level language, one missing bracket): Can be awarded marks Response Q (numbered steps in plain English): Cannot be awarded marks Response R (flowchart): Cannot be awarded marks	**3**	1 mark per correct row. 2+ ticks in a row = 0 for that row. In Section B, questions that ask students to write or refine algorithms must be answered in OCR Exam Reference Language or a high-level programming language (2a); pseudocode, natural English or bullet points are not awarded marks (3b). Minor syntax errors such as one missing bracket are not penalised (3b), so P can gain marks.
4(b) J277 3b	Section A assesses the ability to structure answers logically / the logic of the answer // Section A does not focus on syntactic precision / exact syntax In Section A students can choose how to present the answer // answers can be given in natural English / bullet points / pseudocode / flowcharts (as well as ERL or a high-level language)	**2**	1 mark per bullet, max 2. Do not accept "Section A is easier" / "Section A is worth more marks" (NE, not a reason). Do not accept "Section A has no programming questions": Section A can ask for algorithms.
5(a) J277 2a, 3n	Working: (58 + 54 =) 112 out of / ÷ 160 // 112 / (80 + 80) // (112 / 160) × 100 Answer: 70 (%)	**2**	1 mark for working, 1 mark for the answer. Correct answer with no working = 2 marks. Working mark needs the total 112 (or 58 + 54) over 160 (or 80 + 80). Allow averaging the two papers' percentages: (72.5 + 67.5) ÷ 2 = 70 is a valid method for both marks (it works because the two papers are worth the same, 80 marks each). 112 alone with no percentage = 1 mark (working).

QUESTION	ANSWER	MARKS	GUIDANCE
6(a) J277 2a, 3a, 3b	Section A (50 marks / most of the paper) tests knowledge and understanding of concepts (not only writing code) Paper 2 covers topics such as Boolean logic / searching and sorting algorithms / producing robust programs / programming languages and IDEs (e.g. compilers and interpreters), which need to be learned / revised as theory Only Section B (30 marks) focuses on programming / Practical Programming skills ... ... and Section B also asks students to design, test and refine programs (not only write them) Some answers need trace tables / test plans / suitable test data / flowcharts / truth tables rather than code Students must be able to read and follow code given in OCR Exam Reference Language	**3**	1 mark per bullet, max 3. Each point must say *why* code-writing alone is not enough. "You need theory too" alone = 0 (NE). A topic named from Paper 1 (e.g. networks, CPU) as a reason = 0 for that point.

Total: 22 marks