MODULE R EXAM TECHNIQUE · R2

How Cambridge 0478 Paper 1 and Paper 2 are structured: mark scheme

20 marks · Cambridge 0478 syllabus (exams 2026-2028, version 6, September 2026): section 2 Assessment overview and Content overview; section 3 (start of Algorithms, programming and logic); section 4 Details of the assessment, Logic gate symbols

How to use. One mark per creditworthy point up to the maximum shown. **/** separates alternative words; **//** separates alternative answers. Words in (brackets) are not needed for the mark. Credit any other valid answer that shows the same understanding. All facts are as stated in the 2026-2028 syllabus (checked November 2026); the 2029-2031 syllabus changes Paper 2.

QUESTION	ANSWER	MARKS	GUIDANCE
1(a) 0478 s2 Assessment overview; s4 Paper 1, Paper 2, Scenario question; s3 Algorithms, programming and logic (intro)	One mark for each correct row: The exam lasts 1 hour 45 minutes: Both papers The questions are set on Topics 1 to 6: Paper 1 only The last question is a 15-mark unseen scenario question: Paper 2 only Calculators are not allowed: Both papers Coding answers must be in pseudocode (with one exception): Paper 2 only	**5**	A row with more than one box ticked scores 0. Row 5: the exception is the 15-mark scenario question; Paper 1 (Topics 1 to 6) has no coding answers.
2(a) 0478 s2 Assessment overview, Content overview (topics 5, 9, 10)	One mark for each correct row: Explaining how a firewall helps to keep data safe: 1 Completing a truth table for a logic circuit: 2 Stating the output of an SQL query: 2	**3**	Firewalls are Topic 5 (5.3 Cyber security), so Paper 1. Truth tables are Topic 10 (Boolean logic) and SQL is Topic 9 (Databases), so Paper 2. Accept "P1" / "Paper 1" etc.
3(a) 0478 s3 Algorithms, programming and logic (intro); s4 Scenario question	One mark for each correct row: 5-mark question in Cambridge pseudocode: Can be awarded marks 5-mark question in Python: Cannot be awarded marks 15-mark scenario question in Visual Basic: Can be awarded marks 15-mark scenario question in Pascal: Cannot be awarded marks	**4**	A row with both boxes ticked scores 0. Outside the scenario question, solutions written in program code are not awarded marks. In the scenario question only pseudocode, Python, Visual Basic or Java are accepted; any other language is not awarded marks.

QUESTION	ANSWER	MARKS	GUIDANCE
4(a) 0478 s2 Assessment overview; s4 Paper 2, Scenario question	One mark for a correct stage of working: 105 − 30 = 75 (minutes left) // 75 − 15 = 60 (marks left) // 75 ÷ 60 One mark for the correct answer: 1.25 (minutes per mark) // 1¼ minutes // 1 minute 15 seconds	**2**	A correct answer with no working scores 2. Working must use 1 hour 45 minutes = 105 minutes and 75 − 15 = 60 marks. Do not credit 1.4 (105 ÷ 75 ignores the 30 minutes and 15 marks of the scenario question) for the answer mark.
4(b) 0478 s4 Paper 2, Scenario question	5 (minutes)	**1**	Follow through: 4 × their answer to (a). For example, 1.4 in (a) gives 5.6 here, which gains this mark.
5(a) 0478 s3 Algorithms, programming and logic (intro); s4 Logic gate symbols	Any two from: The syllabus says candidates must use the (standard) logic gate symbols (given in section 4 of the syllabus) The AND gate has its own symbol/shape // the AND symbol has a flat (input) side and a curved / rounded (output) side // is D-shaped A box/rectangle with a label written in it is not the AND gate symbol // writing the name of the gate is not enough ... so the drawing would not be credited / would gain no marks (for that gate)	**2**	max 2. Do not credit "it is wrong" or "it is messy" alone. Do not credit answers that say the logic (A AND B) is wrong: the expression shown is correct; only the symbol is wrong.
6(a) 0478 s4 Paper 2, Scenario question	(Answer) A	**1**	Answer A adds 1 to OverCount each time Weight is greater than Limit.
6(b) 0478 s4 Paper 2, Scenario question; s3 Algorithms, programming and logic (intro)	Any two from: Answer B has a logic error // the logic of B is wrong ... it sets/resets OverCount to 1 (each time) instead of adding 1 to it // OverCount can never be more than 1 // the count / output will be wrong (if more than one parcel is over the limit) Answer A only has a syntax error // a missing colon (after the condition) // a small slip in Python syntax Knowledge of programming language syntax is not examined // the logic is more important than the syntax Answer B uses correct pseudocode / syntax but still does not do what the question asks	**2**	max 2. Do not credit "B is wrong" or "A is better" alone. Do not credit "Python is not allowed": Python is allowed in the 15-mark scenario question.

Total: 20 marks