CAMBRIDGE IGCSE (0478)

Module R: Exam technique

Workbooklet · 3 parts · 61 marks

R1 and R4 are GCSE (OCR) only and not on 0478.

Contents

Part	Topic	Marks
R2	How Cambridge 0478 Paper 1 and Paper 2 are structured	20
R3	Command words and what they are asking for	20
R6	The 15-mark scenario question (0478 Paper 2)	21
	Total	**61**

MODULE R EXAM TECHNIQUE · R2

How Cambridge 0478 Paper 1 and Paper 2 are structured

Original practice questions · 20 marks · ~25 minutes · Cambridge 0478 syllabus (exams 2026-2028): Assessment overview and section 4 Details of the assessment

Name _____ Date _____

Instructions. Answer all questions in the spaces provided. The marks for each part are shown in brackets [ ]. The total for this worksheet is **20 marks**. Do not use a calculator. All facts are from the Cambridge IGCSE Computer Science 0478 syllabus for exams in 2026, 2027 and 2028 (version 6, September 2026). The syllabus for 2029 onwards changes Paper 2.

1

Total: 5 marks

(a) Tick (✓) **one** box in each row to show whether each statement is true of Paper 1 only, Paper 2 only, or both papers. **[5]**

Statement	Paper 1 only	Paper 2 only	Both papers
The exam lasts 1 hour 45 minutes			
The questions are set on Topics 1 to 6 of the syllabus			
The last question is a 15-mark unseen scenario question			
Calculators are not allowed			
Where an answer involves coding, it must be written in pseudocode (with one exception)			

2

Total: 3 marks

An adult evening class is revising for the 0478 exams. The tutor sorts the revision tasks by the paper they belong to.

(a) Write **1** or **2** in each row to show which paper assesses each task. **[3]**

Revision task	Paper (1 or 2)
Explaining how a firewall helps to keep data safe	
Completing a truth table for a logic circuit	
Stating the output of an SQL query on a single-table database	

3 **Total: 4 marks**

These answers were written in a 0478 Paper 2 exam.

(a) Tick (✓) **one** box in each row to show whether the answer **can** be awarded marks. **[4]**

Answer	Can be awarded marks	Cannot be awarded marks
A 5-mark "write an algorithm" question (not the last question) answered in Cambridge pseudocode		
The same 5-mark question answered in Python		
The 15-mark scenario question answered in Visual Basic		
The 15-mark scenario question answered in Pascal		

4 **Total: 3 marks**

The syllabus expects 30 minutes to be spent on the 15-mark scenario question in Paper 2. An exam-timing plan shares the rest of the time on Paper 2 equally between the rest of the marks.

(a) Calculate the number of minutes the plan allows for each of the other marks. Show your working. **[2]**

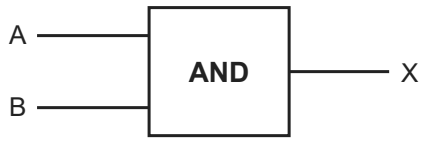
Minutes per mark .....

(b) Question 3 on the paper is worth 4 marks. Use your answer to **(a)** to calculate the time the plan allows for Question 3. **[1]**

Minutes .....

5 **Total: 2 marks**

A Paper 2 question asks for the logic circuit for **X = A AND B**. This drawing is given as the answer.



(a) Explain why this drawing is **not** a suitable answer in a 0478 exam. **[2]**

6 **Total: 3 marks**

A 15-mark scenario question asks for a program that counts how many parcels at a depot weigh more than a limit. One step must add 1 to **OverCount** when **Weight** is greater than **Limit**. Two answers to this step are shown.

Answer A (written in Python)	Answer B (written in pseudocode)

`if Weight > Limit`
`    OverCount = OverCount + 1`
	`IF Weight > Limit`
	`  THEN`
	`    OverCount ← 1`
	`ENDIF`

(a) Identify the answer that has the correct logic. **[1]**

Answer .....

(b) Explain why the mistake in Answer B is more serious than the mistake in Answer A. **[2]**

Total for this worksheet: 20 marks

MODULE R EXAM TECHNIQUE · R3

Command words and what they are asking for

Original practice questions · 20 marks · ~25 minutes · Cambridge 0478 syllabus command words table, 1.1.1, 1.3.2, 2.1.2, 2.2.2, 3.1.2, 3.2.1, 5.3.1, 5.3.2, 6.1.2

Name _____ Date _____

Instructions. Answer all questions in the spaces provided. The marks for each part are shown in brackets [ ]. Before you write, find the command word in each question and ask yourself what kind of answer it wants. The total for this worksheet is **20 marks**.

1

Total: 4 marks

Here are five meanings of command words used in Cambridge IGCSE exams.

A. Set out purposes or reasons; say why and/or how, and support it with relevant evidence.
B. Identify or comment on similarities and/or differences.
C. Give the precise meaning.
D. Apply knowledge to a situation where there is a range of valid responses, to make proposals.
E. State the points of a topic; give its characteristics and main features.

Write the letter (**A** to **E**) of the meaning that matches each command word. Each letter may be used once or not at all. **[4]**

Command word	Letter
Define	
Describe	
Explain	
Suggest	

2 **Total: 4 marks**

You do **not** need to answer the four exam questions below. Read each one, find its command word, and decide what kind of answer it is asking for.

Tick (✓) **one** box in each row. **[4]**

Exam question	A short answer: a name, value or fact, with no explanation	The main features or steps (reasons not needed)	An answer that gives reasons (why and/or how)
Explain why computers use binary to represent data.			
Give **one** example of an input device.			
Describe how an odd parity check is used to find errors in data after transmission.			
Identify the register that holds the address of the next instruction to be fetched.			

3 **Total: 4 marks**

Staff at an insurance company receive many emails each day. Parts (a) and (b) are on the same topic. Notice how the command word changes what you need to write.

(a) Describe phishing. **[2]**

(b) Explain how checking the URL attached to a link in an email can help the staff keep data safe from phishing. **[2]**

4 **Total: 3 marks**

An exam question says: **"Compare half-duplex and full-duplex data transmission."** This answer was written for it:

> *"Full-duplex data transmission lets data travel in both directions at the same time."*

(a) State why this answer does not do what the command word **Compare** asks for. **[1]**

(b) Write **two** further points that would improve the answer. Each point must refer to **both** half-duplex and full-duplex. **[2]**

1

2

5 **Total: 3 marks**

A fruit farm plans to use an automated system to control the watering of its trees. Sensors measure the soil, a microprocessor decides when water is needed, and actuators open and close the water valves.

Suggest **three** advantages to the farm of using this automated system. **[3]**

1

2

3

6 **Total: 2 marks**

An image has a resolution of 128 × 64 pixels and a colour depth of 16 bits.

Calculate the file size of the image in kibibytes (KiB). Show all your working. **[2]**

Answer: ..... KiB

Total for this worksheet: 20 marks

MODULE R EXAM TECHNIQUE · R6

The 15-mark scenario question (0478 Paper 2)

Original practice questions · 21 marks · ~25 minutes · Cambridge 0478 syllabus Paper 2 scenario question, 7.4, 7.5, 7.8, 7.9, 8.1, 8.2

Name _____ Date _____

Instructions. Answer all questions in the spaces provided. The marks for each part are shown in brackets [ ]. The total for this worksheet is **21 marks**. Questions 1 and 2 are about the scenario in the box below. Read it carefully before you start: Question 3 asks you to write the full program. In the exam, allow about 30 minutes for the 15-mark question; aim to spend about 20 minutes on Question 3 here.

Scenario: a city cycle-hire scheme

A city cycle-hire scheme has 12 docking stations. Data about the number of bikes hired from each station is recorded for one week (7 days).

The one-dimensional (1D) array `StationName[]` already stores the name of each of the 12 stations.

The two-dimensional (2D) array `Hires[]` is used to store the number of bikes hired from each station on each day. The position of each station's data in `Hires[]` is the same as its position in `StationName[]`. For example, `Hires[1, 1]` stores the number of bikes hired from the station in `StationName[1]` on day 1.

The 1D array `StationTotal[]` is used to store the total number of bikes hired from each station in the week.

The program must:

- **R1** allow the number of bikes hired from each station on each day to be input and stored in `Hires[]`, validating each number on entry: it must be from 0 to 300 inclusive
- **R2** calculate and store in `StationTotal[]` the total number of bikes hired from each station in the week, and output the name of each station with its total
- **R3** count and output how many stations had **fewer than** 150 bikes hired in the week
- **R4** find the highest weekly total, and output this total together with the name of **every** station that has this total.

1

Total: 4 marks

(a) State what is stored in `Hires[3, 5]` **[1]**

(b) Before writing a program, plan which standard method each requirement needs. Tick (✓) **one** box in each row to show the main standard method needed for each requirement. **[3]**

Requirement	Validation	Totalling	Counting	Finding the maximum
R2 (weekly total for each station)				
R3 (stations with fewer than 150 hires)				
R4 (highest weekly total)				

2 **Total: 2 marks**

A programmer wrote this pseudocode to meet requirement **R1**. It would **not** gain full credit in the 15-mark question.

```
01 FOR Station ← 1 TO 12
02     FOR Day ← 1 TO 7
03         INPUT Hires[Station, Day]
04         IF Hires[Station, Day] < 0 OR Hires[Station, Day] > 300
05           THEN
06             OUTPUT "Error"
07             INPUT Hires[Station, Day]
08         ENDIF
09     NEXT Day
10 NEXT Station
```

Identify **two** different problems with this pseudocode and describe how to correct each problem. **[2]**

Problem 1

Correction

Problem 2

Correction

3 **Total: 15 marks**

Write a program for the cycle-hire scheme in the box at the start of this worksheet that meets requirements **R1**, **R2**, **R3** and **R4**.

You must use pseudocode or program code **and** add comments to explain how your code works.
You do **not** need to declare any arrays or variables; you may assume that this has already been done.
You must use the array names given in the scenario.
All inputs and outputs must contain suitable messages.

Write your program here. **[15]**

Before you finish: check each requirement R1 to R4 against your code, and check every input and output has a message.

Total for this worksheet: 21 marks