IT

Teacher guide

INCLUDED ON THE
KS4 PERFORMANCE TABLES

OCR Level 1/Level 2

Cambridge National in

IT

J836

For first teaching in 2022 | Version 2

Exploring our exams: a guide to our Sample Assessment Material

ocr.org.uk/cambridgenationals

Cambridge Nationals

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Introduction

This is Sample Assessment Material (SAM) which has been produced for the qualification OCR Level 1/Level 2 Cambridge National in IT.

The SAM is an example exam paper that we publish alongside a new specification to help illustrate its intended style and structure when a qualification is first launched. We wanted to share the story of our assessment approach with you so when you look through the paper you will find we have pointed out certain features and explained the decisions we have made.

Resources to help support in teaching different areas of content can be found on the Cambridge National in IT webpage under 'Planning and teaching'.

Our exam papers are developed with our accessibility principles in mind. The Cambridge Nationals Understanding the assessment: examined and moderated guide tells you a little more about the principles and rationale underpinning our approach for the qualifications. The 'Command Words' are in both the Understanding the assessment guide and the specification. These tell you what we mean by each command word and how students should approach the question and understand its demand.

You said, we did

During the development of this qualification, **we talked extensively with teachers, subject experts** and our senior assessment teams to influence it's structure, content and assessment materials. We then shared our final materials with teachers to make sure that they met their needs.

You told us that you wanted **to keep the exam as close to the current exam** for the existing Cambridge National in Information Technologies, so that's what we have tried to do.

You told us that **you would like a creative element to the exam paper**, so there will always be 1 creative question in Section B.

You told us that you would like **a straightforward and clear assessment** which is accessible by all students, so that's what we have tried to do with the scenarios.

2

All students will sit the exam at the same time on the same day.

The time allowed is designed to give students approximately one minute per mark plus 20 minutes reading/drawing time.

Each exam will sample topics from across the unit. The topics may not necessarily be in the same order as they appear in the unit content.

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This exam will always be set and marked by us. Assessments will be available in January and June each year. The result from the exam taken in the final assessment series before certification will be the one that counts towards the student's overall grade.

…day … Month Year – Morning/Afternoon

Level 1/Level 2 Cambridge Nationals in IT

R050/01 IT in the Digital World

SAMPLE ASSESSMENT MATERIAL (SAM)

Time allowed: 1 hour 30 minutes

No extra materials are needed.

Write clearly in black ink. **Do not write in the barcodes.**

Centre number ☐☐☐☐☐   Candidate number ☐☐☐☐☐

First name(s) _____

Last name _____

If students require additional answer space, lined pages may be available at the end of the answer booklet in a live question paper. Remember the question number(s) must be clearly shown.

INSTRUCTIONS
- Use black ink.
- Write your answer to each question in the space provided. You can use extra paper if you need to, but you must clearly show your candidate number, the centre number and the question numbers.
- Answer **all** the questions.

INFORMATION
- The total mark for this paper is **70**.
- The marks for each question are shown in brackets **[ ]**.
- This document has 16 pages.

ADVICE
- Read each question carefully before you start your answer.

The exam will always have 70 marks. Section A will have 15 marks and Section B will have 55 marks.

Section A contains a maximum of 5 multiple-choice questions worth 1 mark each. All others will be a mix of 1 or 2 mark short response questions.

Section A

1 A connecting line is a component of a flowchart.

Identify **two other** components of a flowchart.

1 ....

2 ....

[2]

2 Identify **one** display hardware consideration for a Human Computer Interface (HCI).

....

[1]

The number of marks assigned to a question will always be given at the end of the question and will always be right aligned.

Students should use a tick (✓) in the box to show their response.

3 Which of these is formatted as an **alphanumeric** data type?
(Tick (✓) the correct box)

A	14/04/2021	☐
B	£10.99	☐
C	432BJ	☐
D	Y / N	☐

[1]

Multiple-choice questions will test a range of knowledge from across the unit content. They allow us to assess Performance Objective 1 – Recall knowledge and show understanding of IT in the Digital World and Performance Objective 2 – Apply knowledge and understanding.

4 Which of these is **not** a secondary research source?
(Tick (✓) the correct box)

A	Book	☐
B	Interview	☐
C	Magazine	☐
D	Website	☐

[1]

There will always be a maximum of four response options for each multiple choice question and these will always be given in alphabetical order. The four response options will consist of the correct answer and distractors.

Appendix B in the Specification has a glossary of Command Words that will be used in our exams. The glossary tells you what we mean by each command word.

Every question will assess one or more Topic Area(s), or a sub-part of a Topic Area.

Instructions will be given on how to show your answers for this type of forced choice response question.

5 Identify **one** logical storage location.

....

[1]

6 Which type of test checks that a system will work on a device screen?

....

[1]

7 Which of these hackers has permission to hack into a business computer system?

(Tick (✓) the correct box)

A	Black Hat	☐
B	Grey Hat	☐
C	White Hat	☐

[1]

8 Draw a line to link the type of social engineering to the correct description.

You will only use two types of social engineering to complete the task.

Type of social engineering	Description
Baiting	
	Criminals promise goods to get the information they need
Phishing	
	Criminals use computer programs designed to trick a user into buying and downloading unnecessary and dangerous software
Scareware	

[2]

Turn over

4

9   Hackers have accessed a business database. Some of the stored data has been deleted.

       This is an example of? *(Tick (✔) the correct box)*

       A   Data destruction ☐

       B   Data manipulation ☐

       C   Data modification ☐

       D   Data theft ☐

                                                                                      [1]

10   Keypads are one physical protection measure.

       Identify **one other** physical protection measure.

       ....

                                                                                      [1]

> When a question asks for a specific number of points the number of points will be in bold.

11   Which legislation applies to employees using a computer system?

       (Tick (✔) the correct box)

       A   Copyright, Designs and Patents Act ☐

       B   Data Protection Act ☐

       C   Freedom of Information Act ☐

       D   Health and Safety at Work Act ☐

                                                                                      [1]

> Where the stem forms a complete question, it will always be presented in this way.

12   Identify **one** type of distribution channel connectivity that could be used for digital communications.

       ....

                                                                                      [1]

13   Complete the sentence.

       When talking about the Internet of Everything (IoE), WWW stands for

> Where a response finishes a sentence or statement, it will always be presented in this way.

       ....

                                                                                      [1]

6

5

Section B

Monty Bella restaurant has a takeaway service. All meals on the menu can be ordered by customers to takeaway. Customers telephone the restaurant to order their meals. The total cost of the order is calculated by the restaurant. Customers pay for the order using a debit card.

When they order, customers are given an order number and a time when the order will be ready for collection.

14   The orders are handwritten by the restaurant staff.
      An example of an order is shown in **Fig 1.**

Name	Mia Taylor
Email address	MT901@reur.co.uk
Meals	Beef pie with chips Lasagna Salad
Cost	£18.70
Paid	Y
Order number	2378
Collection time	19:15

Fig.1

(a)   Complete the table to show the data types that are used when entering the order onto a computer system. Justify your choice.

	Data Type	Justification
Name		
Cost		
Paid		

[9]

6

(b)

(i) Describe **one** characteristic of an external solid-state drive that would make it suitable for Monty Bella to store the customer orders.

....

....

....

....

[2]

(ii) Identify **one** logical storage location that could be used to store the customer orders.

....

....

[1]

Question numbers will always be displayed as increasing numbers from 1.

Part questions will always be displayed as **(a)**, **(b)**, etc.

Sub-questions will always be displayed as **(i)**, **(ii)**, etc.

15 There have been occasions where customer orders have been mixed up.

Monty Bella is thinking about creating a website where customers can order takeaway meals and pay online.

(a) A Human Computer Interface (HCI) will be created as part of the website.

(i) Explain the purpose of a Human Computer Interface (HCI).

....

....

....

....

[2]

(ii) Customers of Monty Bella could use the HCI using the keyboard interaction method.

Sub-content topic areas will be sampled across exam papers, over time.

Explain **one** advantage and **one** disadvantage to the **customers** of using a keyboard to interact with the HCI.

Advantage ....

....

....

....

....

....

Disadvantage ....

....

....

....

....

....

[4]

(iii) Identify **one** other interaction method that could be used with the HCI

....

[1]

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Turn over

8

(b) A validation tool that limits the user choice could be applied to the quantity of each meal that customers can order through the Monty Bella website.

Explain why a limited choice validation tool will reduce errors when customers are ordering meals.

....

....

....

....
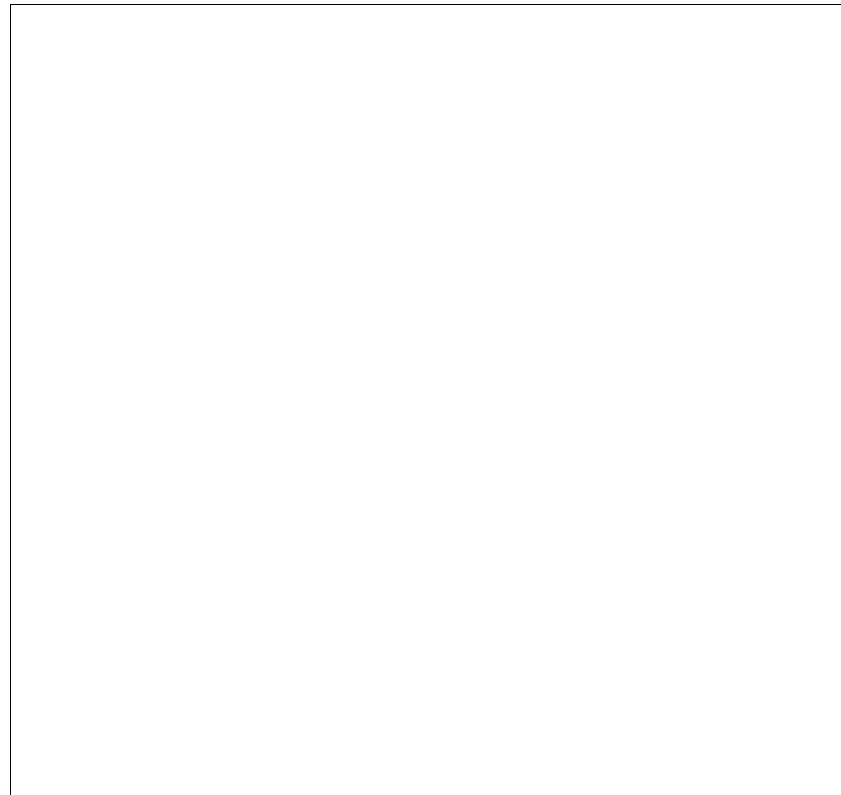
[2]

9

(c) Create a mind map to plan the content for the homepage of Monty Bella's new takeaway website.

Marks will be awarded for:

- Content

- Layout

There will always be an 8 mark creative question, which will be marked using a level of response mark scheme.

[8]

16 The Monty Bella website has now been created.

(a) User testing has been carried out.

Explain why user testing should be carried out on the Monty Bella website.

....

....

....

....

....

....

[2]

A leaflet has been created to advertise the takeaway service of Monty Bella restaurant. The leaflet will be distributed by email to existing customers.

(b) Explain **one** advantage to the Monty Bella **restaurant** of using a leaflet to advertise the takeaway service.

....

....

....

....

[2]

(c) Explain **one** disadvantage to the **customers** of distributing the leaflet by email.

....

....

....

....

[2]

Questions and contexts will use the active voice wherever possible.

The number of lines given for a question indicate the approximate length of the answer required.

Short and medium answer responses test knowledge and understanding from across the unit content and allow students the opportunity to give free responses.

17 Customers have to register to use the takeaway website. To register, customers need to input their details including name, address, a phone number and payment details.

The customer details are stored by Monty Bella restaurant.

(a) Identify the legislation that relates to the storing of customer details.

....

[1]

(b) Identify **two** actions that need to be taken by the restaurant to comply with the legislation.

1 ....

....

2 ....

....

[2]

Monty Bella restaurant is concerned about the security of the website.

(c) When a customer registers for the website, the customer must create a username and password.

Explain how the usernames and passwords will increase the security of the website.

....

....

....

....

....

....

[2]

(d) The restaurant has been advised to install a firewall.

Explain how a firewall will increase the security of the Monty Bella website.

....

....

....

....

[2]

When a question asks for a specific number of points, we will always put numbers or response headings against the answer lines to show where students should write each point of their answer.

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Turn over

18 Monty Bella restaurant wants to collect feedback from its customers about the takeaway service.

An online survey will be used to collect the feedback from the customers.

Explain **one** advantage and **one** disadvantage to the **restaurant** of using an online survey to collect the data.

Advantage ....

....

....

....

Disadvantage ....

....

....

....

[4]

Although the total mark shown is 4 marks there are 2 marks awarded for each explanation.

19 Monty Bella restaurant uses a smart device connected to the Internet of Everything (IoE).

Discuss the advantages and disadvantages to the **restaurant** of using a smart device connected to the Internet of Everything.

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.... **[9]**

There will always be 1 extended response question in Section B of the exam. This will always be a 9 mark question which will be marked using a level of response mark scheme.

Turn over

Indicates to students there are no more questions to answer.

END OF QUESTION PAPER

Need to get in touch?

If you ever have any questions about OCR qualifications or services (including administration, logistics and teaching) please feel free to get in touch with our customer support centre.

Call us on
01223 553998

Alternatively, you can email us on
support@ocr.org.uk

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👍**I like this**   👎**I dislike this**

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