Modified Enlarged 18pt

OXFORD CAMBRIDGE AND RSA EXAMINATIONS

Wednesday 11 January 2023 – Afternoon

Level 1/2 Cambridge National Certificate in Information Technologies

R012/01 Understanding tools, techniques, methods and processes for technological solutions

Time allowed: 1 hour 45 minutes
plus your additional time allowance

No extra materials are needed.

Please write clearly in black ink.

Centre number | | | | | |

Candidate number | | | | |

First name(s) _____

Last name _____

READ INSTRUCTIONS OVERLEAF

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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 80.

The marks for each question are shown in brackets [ ].

ADVICE

Read each question carefully before you start your answer.

Answer ALL the questions.

SECTION A

1 A coffee shop enters the results of a survey into a spreadsheet. The results are called data.

Is this statement TRUE or FALSE?

_____ [1]

2 Draw a line to link EACH digital device with its correct description. [2]

DIGITAL DEVICE	DESCRIPTION
	A device for collecting customer feedback.
security infrared sensor	
	A device used to check stock levels.
barcode reader	
	A device which detects movement.

3 Tom is presenting the results of a survey in a chart.

Identify ONE advantage of presenting the results in this way.

_____

_____ [1]

4 A mind map is used by a project team. Describe ONE purpose of a mind map.

_____

_____

_____

_____ [2]

5 What does the 'M' in SMART goals stand for? [1]

Place a tick in the box next to the correct answer.

	Tick
Manageable	
Measurable	
Method	
Minimal	

6 A cyber-security attack has deleted some customer records from a business system.

This is an example of data destruction.

Is this statement TRUE or FALSE?

_____ [1]

7 A project team is preparing a project plan.

(a) Identify ONE input for the initiation phase.

_____ [1]

(b) Identify ONE output from the execution phase that is an input into the evaluation phase.

_____ [1]

SECTION B

Read the scenario below. Questions 8–10 relate to this scenario.

‘NotFilms’ is a company offering films for rent to stream over the internet. A project team will be following the project life cycle for the development of the company’s website. It will hold regular meetings to review progress. One of the key considerations is that the company must comply with current legislation.

The website will need customers to complete a data capture form.

This will allow customers to:

create an online account using their email address and a password that they will create themselves
verify their new account using the link emailed to them by NotFilms
click on the link to activate their account
insert their payment details to pay the rental fees for the films.

Once the account is created, customers can sign in and:

select a maximum of two films to rent at any given time
have access to the films for 48 hours once payment has been approved.

8 (a) **Identify and explain TWO advantages to the project team of following the project life cycle to develop the website.**

1 _____

_____

_____

_____

_____

_____

2 _____

_____

_____

_____

_____

_____

[6]

(b) **Describe the purpose of iterative reviews during the project life cycle.**

_____

_____

_____

_____ **[2]**

9 (a) Identify the legislation that NotFilms must comply with because:

(i) it rents out the films created by the film companies.

_____ **[1]**

(ii) it stores customer information.

_____ **[1]**

(b) Describe ONE constraint that the legislation identified in part (a)(ii) will have on the website project.

_____

_____

_____

_____ **[2]**

10 FIG. 1 opposite shows part of a data capture form used by NotFilms with the following fields:

(a) Select a field from FIG. 1 that matches EACH data type shown in the table below. Insert the field you have chosen against the matching data type. [4]

Data Type	Field
Alphanumeric	
Currency	
Date	
Text	

FIG. 1

NotFilms Customers						
Title	First Name	Last Name	Post Code	Rental Price	Start of Rental	End of Rental

(b) (i) NotFilms has informed customers that it wants to add photo IDs to its data capture form.

Identify this data type.

_____ [1]

(ii) The data capture form will use limited choice as a data type for the film titles.

State ONE reason why limited choice is the MOST appropriate data type for this field.

Justify your answer.

Reason _____

_____

Justification _____

_____

_____

_____

[3]

SECTION C

Read the scenario below. Questions 11–15 relate to this scenario.

The NotFilms website has been created. The number of customers has increased to more than 100 000 with customers accessing the service from all over the world. NotFilms now offers over 50 000 films for rent.

NotFilms has been the victim of a cyber-security attack which resulted in the theft of all customer data. Following the cyber-security attack, NotFilms is moving all its data storage to the Cloud.

NotFilms understands that the risk of a cyber-security attack is reduced for data stored on the Cloud. NotFilms knows that customers are still at risk from social engineering attacks.

Customers will be informed of the decision to move to the Cloud by email.

11 Discuss the consequences on NotFilms of the theft of the customer data. [8]

_____

_____

_____

_____

_____

12 Identify and explain ONE advantage to NotFilms of moving to the Cloud to distribute films to a global audience.

_____

_____

_____

_____

_____

_____ **[3]**

13 (a) **Describe ONE social engineering technique that could be used to persuade a customer to provide access to their personal details on the Cloud.**

_____

_____

_____

_____ **[2]**

(b) **One threat that could occur to the NotFilms website is a Distributed Denial of Service (DDoS) attack.**

Identify and explain ONE impact of a DDoS on NotFilms.

_____

_____

_____

_____

_____

_____ **[3]**

14 NotFilms accesses the films it rents out through film distributors via the Cloud. Customers access the films they rent from NotFilms via the Cloud.

Draw arrows between the Clouds to show how the film rented from NotFilms reaches the customer. [2]

15 NotFilms uses email to contact its customers.

(a) Identify and describe ONE advantage to NotFilms of using email to contact its customers.

_____

_____

_____

_____ **[2]**

(b) Information will be included in the BODY of each email.

Describe ONE limitation on this information.

_____

_____

_____

_____ **[2]**

SECTION D

Read the scenario below. Questions 16–18 relate to this scenario.

Five small bookshops in neighbouring towns are working together to develop a website to try to attract more customers. They put together a project team for this task.

An IT security company has reviewed the data security practices of each of the bookshops. It found that staff:

share passwords
leave computers logged on
throw old hardware into the skip at the local tip without removing the data from hard drives.

The bookshops have agreed that they will provide Book Sellers International with data on their book sales and publicity about their book-related events to attract a wider audience.

16 The staff at the bookshops need guidance on secure working practices when using IT equipment and accessing/creating business data.

(a) A staff guide for good data security practices will be created using desktop publishing (DTP).

State ONE reason why DTP would be a suitable method to present the staff guide.

Justify your answer.

Reason _____

_____

Justification _____

_____

_____

_____

[3]

Part of the staff guide will relate to the physical destruction of data.

(b) (i) Describe the term 'physical destruction of data'.

_____

_____ **[1]**

(ii) Identify TWO methods the bookshops could use to physically destroy data.

1 _____

2 _____

[2]

The bookshop staff must understand their personal responsibilities to ensure that data, information, and equipment are not misused.

This includes both the accidental and deliberate misuse of data.

17 (a) Identify and describe ONE example of the unethical use of DATA OR INFORMATION.

_____

_____

_____

_____ **[2]**

(b) Identify and describe ONE example of the unethical use of EQUIPMENT.

_____

_____

_____

_____ **[2]**

Book Sellers International collects data from bookshops around the world. The data includes:

name of shop
location of shop
number of books sold by title and category
local, national and international book events, including 'Book Festivals' and 'Meet the Author' tours.

The collected data will be analysed and used in a variety of different ways.

18 Book Sellers International will use distribution channels to present the analysed data to a global audience.

Discuss the suitability of different types of distribution channel for this purpose. [10]

SECTION E

Read the scenario below. Questions 19–21 relate to this scenario.

The bookshops gather information from external sources including surveys and bookshops in different areas of the United Kingdom (UK). Consumer panels are used to gather information from local people.

The bookshops will use the information to promote different types of books to a variety of potential customers.

19 Identify TWO DIFFERENT types of demographics that the bookshops could consider about potential customers.

1 _____

2 _____

[2]

20 Identify and explain ONE advantage to the bookshops of using consumer panels to gather information from LOCAL people.

_____

_____

_____

_____ **[2]**

The project team who developed the website has identified the need for a review of its success after twelve months.

21 Identify TWO success criteria that could be used by the project team to confirm the positive impact of the website.

State why EACH of the success criteria is important.

1 _____

_____

Why it is important _____

_____

2 _____

_____

Why it is important _____

_____

[4]

END OF QUESTION PAPER

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