Modified Enlarged 18pt

OXFORD CAMBRIDGE AND RSA EXAMINATIONS

Tuesday 17 May 2022 – 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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1149551663

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 **The purpose of a critical path is to show the project activities that must be completed on time.**

Is this statement TRUE or FALSE?

_____ [1]

2 **Identify the data type shown in cell D4.**

	A	B	C	D	E
1	Test Scores				
2	Student	Test 1 (/20)	Test 2 (/10)	Total Marks	
3	Amit	12	9	21	
4	Mia	15	5	20	
5	Zac	17	8	25	
6					
7					

_____ [1]

3 **Complete the following sentence:**

An untrue statement about a person is known as

_____ [1]

4 **An end-user receives an email requesting access to the IT system in exchange for a service to improve network speed.**

Name this type of social engineering attack.

_____ **[1]**

5 **Identify ONE logical prevention measure that controls the files allocated to an employee.**

_____ **[1]**

6 **Describe what is meant by an iterative review.**

_____

_____

_____

_____ **[2]**

7 **A managing director wants to hold an online meeting with his managers who are based in different countries.**

Identify the distribution channel he could use to hold this meeting.

_____ **[1]**

8 Identify TWO system vulnerabilities which could be exploited in a cyber-security attack.

1 _____

2 _____

[2]

SECTION B

Read the scenario below. Questions 9 to 15 relate to this scenario.

Progress Talent Show (PTS) has asked a web designer to design a website to advertise its talent shows. The web designer will follow the project life cycle and will use a mind map to plan the website. The mind map will be presented to PTS.

PTS has asked that its email address is clearly shown on the website. People who want to enter the talent shows must email PTS.

PTS will then send an email containing an interactive form. The interactive form must be completed with the entry details and the email returned to PTS.

The entry details from the online form will be downloaded by PTS and imported into its database.

PTS has also asked the web designer to:

recommend logical prevention methods that could be used to protect the stored entry data
provide details of IT legislation that PTS needs to comply with.

When the website has been created a final project evaluation will be carried out.

9 Identify TWO inputs of the planning phase for the PTS website.

1 _____

2 _____

[2]

10 Explain ONE advantage to the web designer of using a mind map to generate ideas for the PTS website.

_____

_____

_____

_____ **[2]**

11 The mind map will be presented to PTS using digital technology.

(a) Identify ONE piece of HARDWARE that could be used to present the mind map to PTS. Justify your response.

Hardware _____

Justification _____

_____

_____

_____

[3]

(b) Identify ONE type of SOFTWARE that could be used to present the mind map to PTS using digital technology. Justify your response.

Software _____

Justification _____

_____

_____

_____

[3]

12 **People who want to enter the talent shows must complete an interactive form that is emailed back to PTS. The details from the interactive form are downloaded and imported into the PTS database.**

Describe ONE advantage and ONE disadvantage to PTS of using this method to collect the data to import into its database.

Advantage _____

_____

_____

_____

Disadvantage _____

_____

_____

_____

[4]

13 The web designer has recommended logical prevention measures that could be used to protect the stored entry details.

Discuss logical prevention measures that could be used.

Your response MUST include how the logical prevention measures will reduce the risk of a cyber-security attack on the stored entry details. [10]

14 Identify the IT legislation that relates to PTS employees using its IT systems for long periods of time.

_____ **[1]**

15 Explain ONE reason why it is important that the web designer carries out a final project evaluation.

_____

_____

_____

_____

_____

_____ **[3]**

SECTION C

Read the scenario below. Questions 16 to 20 relate to this scenario.

The website has been created. Progress Talent Show (PTS) is using the website to advertise the talent shows and sell tickets online.

Customers who want to buy tickets to watch the talent shows have to provide their personal details and pay by debit card. They also have to confirm that their personal data can be stored and used by PTS. This personal data is stored in a spreadsheet.

E-tickets are sent by email. The e-tickets need to be printed out as they contain a unique bar code. The tickets are checked on arrival at a talent show.

PTS understands that it has to think about possible cyber-security attacks, including hacking on the personal data that is stored on its IT systems.

When the talent shows have ended PTS will review the data it has gathered about the people who watched the shows. PTS employees will use a task list to plan the activities that will be needed to carry out the review.

16 Identify a suitable device to read the bar code on the e-tickets.

_____ **[1]**

17 PTS needs to think about the hacking of the stored data. Hackers can manipulate or modify data.

Describe the difference between data manipulation and data modification.

_____

_____

_____

_____ **[2]**

18 Explain TWO benefits to PTS of using the personal data it has collected from customers who have bought tickets.

1 _____

_____

_____

_____

2 _____

_____

_____

_____

[4]

19 The personal data of customers is stored in a spreadsheet.

Identify TWO DIFFERENT types of charts that could be used to present the data stored in the spreadsheet.

1 _____

2 _____

[2]

20 PTS staff use a task list to plan the activities needed to carry out the final review.

(a) Identify the software type that could be used to create the task list.

_____ **[1]**

(b) Explain ONE advantage to PTS of using a task list to plan the activities needed to carry out the final review.

_____

_____

_____

_____ **[2]**

SECTION D

Read the scenario below. Questions 21 to 24 relate to this scenario.

Ski Progress (SP) is an organisation that plans ski trips for schools.

For each ski trip SP uses a PERT chart to plan all activities that are needed.

SP has a webpage on its website for parents to access up to date information and photographs of the ski trip. Parents access the information and photographs through the webpage.

SP is concerned with recent news about cyber-security attacks, especially from pharming. It is considering what advice and guidance to share with parents about how to stay safe online.

SP collects data from schools across the United Kingdom (UK). It will use this big data set to improve its decision-making.

21 SP uses a PERT chart to plan all the activities for each ski trip.

Discuss the advantages and disadvantages to SP of using a PERT chart to plan each ski trip. [8]

_____

_____

_____

22 Parents access the information and photographs through the webpage.

Identify the TYPE of visibility this webpage would provide to the parents. Justify your response.

Visibility _____

Justification _____

_____

_____

_____

[3]

23 A parent has been the victim of a pharming attack.

(a) Identify TWO actions that can be taken by SP to advise parents how to reduce pharming attacks.

1 _____

_____

2 _____

_____

[2]

(b) Identify ONE IT presentation method that SP could use to share guidance with parents about staying safe online.

_____ [1]

24 Explain ONE benefit and ONE drawback to SP of using big data to help it make decisions about future ski trips.

Benefit _____

_____

_____

_____

Drawback _____

_____

_____

_____

[4]

SECTION E

Read the scenario below. Questions 25 and 26 relate to this scenario.

Feedback is collected from parents and teachers after each ski trip. Paper-based questionnaires are used to gather the feedback.

SP uses the feedback to create an integrated document. Different presentation methods are used in the integrated document to display the results.

25 Other than paper-based questionnaires, identify and describe TWO OTHER methods that could be used to collect feedback from parents and teachers. [6]

1 _____

_____

_____

_____

_____

_____

2 _____

_____

_____

_____

_____

_____

26 Identify TWO presentation methods that could be used in the integrated document to display the results. Justify EACH of your responses.

1 _____

Justification _____

_____

_____

_____

2 _____

Justification _____

_____

_____

_____

[6]

END OF QUESTION PAPER

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