



Oxford Cambridge and RSA

Monday 13 May 2019 – Morning

**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



No additional material is required for this Question Paper



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

Centre number

Candidate number

First name(s) _____

Last name _____

INSTRUCTIONS

- Use black ink.
- Answer **all** the questions.
- Write your answer to each question in the space provided.
- Additional paper may be used if required but you must clearly show your candidate number, centre number and question number(s).

INFORMATION

- The total mark for this paper is **80**.
- The marks for each question are shown in brackets [].
- This document consists of **16** pages.

Answer **all** the questions.

SECTION A

1 **Fig. 1** shows part of a PERT chart.

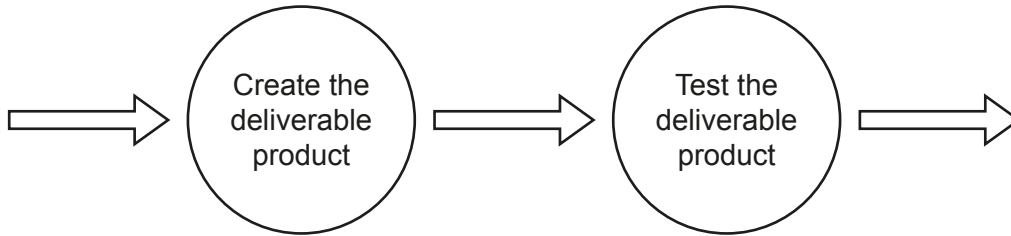


Fig. 1

During which phase of the project life cycle do these tasks take place?

..... [1]

2 You have been given a visualisation diagram to help you plan a project.

(a) Identify **one** advantage of **using** a visualisation diagram as a planning tool.

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..... [1]

(b) Identify **one** disadvantage of **using** a visualisation diagram as a planning tool.

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..... [1]

3 You have collected information from a client.

What is meant by the term information?

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..... [2]

4 A project manager needs to take electronic files to a meeting with a client.

What physical storage **device** could the project manager use to take these electronic files to the meeting?

..... [1]

5 A cyber security company has been given permission to hack into a system to identify weaknesses.

What type of 'hat' hacking is this?

..... [1]

6 A denial of service (DoS) cyber security attack has been carried out on the website of an online shop.

What is meant by the term DoS?

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..... [2]

7 A sports centre has created a website to present information to its target audience.

What **type** of visibility does an external website give to its target audience?

..... [1]

SECTION B

Read the scenario below. Questions 8–11 relate to this scenario.

A bank operates through high street branches and online services. Most of its customers are small businesses who visit the branches and use the online services.

The bank must protect the security of customer data at all times. This involves securely destroying customer data that is no longer required.

The bank helps customers to keep their business data safe by sharing advice through its website and by providing leaflets in its branches. It also uses *YouTube* as a distribution channel for sharing cyber security advice with customers. These *YouTube* resources are accessible via links on the bank’s website.

The bank creates a monthly report on the cyber security attacks that have been identified and prevented. This report includes data on the type of cyber security attack, its seriousness, the date and time of each attack as well as the total number of attacks for that month.

8 There has been a recent cyber security attack on the bank.

Discuss the possible **financial** consequences of this attack on the business customers. [8]

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9 The bank needs to securely destroy customer data that is no longer required.

Identify and describe **one** physical destruction method that could be used to securely destroy customer data.

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..... [2]

10 The bank uses *YouTube* to share cyber security advice with customers.

(a) Explain **two** advantages of using *YouTube* to share cyber security advice with customers.

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[4]

(b) Identify **one other** distribution channel that the bank could use to share cyber security advice with customers.

..... [1]

11 The bank creates a monthly printed report on cyber security attacks.

(a) Identify **one suitable** method for presenting the data on cyber security attacks in the monthly printed report.

..... [1]

(b) Explain **one** advantage and **one** disadvantage of the method you selected in **part (a)** for presenting the data.

Advantage

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Disadvantage

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[4]

7
SECTION C

Read the scenario below. Questions 12–15 relate to this scenario.

Coventry Parking (CP) operates railway station car parks in the West Midlands. CP has set up a project team to provide customers with more payment options when using the car parks.

Currently, all customers buy a car parking ticket from a machine using cash. The new payment system will enable customers to enter and exit a car park using a contactless credit or debit card. Customers will drive in, tap their card on the contactless reader on the entry column which will allow them to enter a car park without a ticket. On leaving the car park customers will tap their card again, the correct fee will be calculated and payment will be taken automatically.

The project team carries out market research with existing CP customers to establish whether they would use this new parking system.

12 The project team is planning the design of the new payment system using the planning tool shown in Fig. 2.

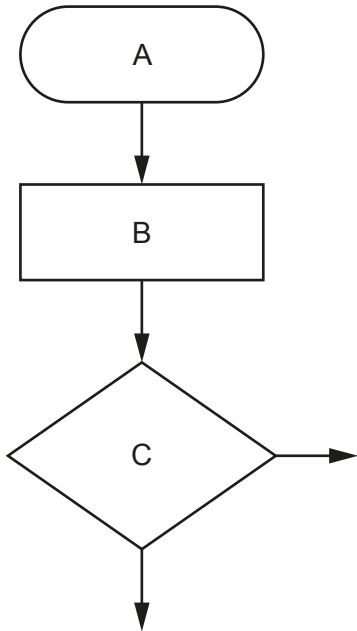


Fig. 2

Identify the **three** components shown in Fig. 2.

- A:
- B:
- C:

[3]

13 The project team carries out market research with existing CP customers to identify whether they will use the new payment system.

(a) Describe **one** way that email could be used to support the collection of this information.

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..... [2]

(b) Explain **one** advantage **to CP** of using email to carry out this market research.

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..... [2]

(c) Explain **one** disadvantage **to CP customers** of being asked questions about the new payment system by email.

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..... [2]

14 The new payment system goes live. A week later, a cyber security attack takes place that causes disruption to the **operation** of the new system.

(a) Explain **two** impacts this disruption could have on the customers who use the car parks.

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[6]

(b) (i) Security and legislative implications are considered during the project life cycle. During which stage are these considered?

..... [1]

(ii) Identify and describe **one** logical security method that could be used to keep the data held in the payment system secure.

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[3]

15 At which point during a stage of the project life cycle does an iterative review happen?
..... [1]

SECTION D

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

A project team has been given the task of creating and implementing a loyalty scheme that customers can join for a new supermarket chain. Customers will join this scheme through the supermarket website. They will be given a unique reference number and password to log into their account. The supermarket will store all information about the loyalty scheme on a cloud storage system.

Loyalty scheme members will receive a loyalty scheme card which contains a barcode showing their unique reference number. The loyalty scheme will allow customers to collect points and receive discount vouchers. Customers will need to agree to the supermarket recording data on their purchases. This data includes time and date of purchase, items bought, prices paid and the store location. To earn points, customers must have their loyalty scheme cards scanned at the checkout. For online shopping they will need to type in their unique reference number to earn points.

16 (a) Explain **two** advantages **to the project team** of following the project life cycle when creating and implementing the loyalty scheme.

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[4]

(b) Identify **two** disadvantages **to the project team** of using mind maps as a planning tool for the loyalty scheme.

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[2]

17 State **one** reason why a cloud storage system would be an appropriate method to store the information about the loyalty scheme. Justify your response.

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..... [2]

18 Data will be collected when customers use their loyalty scheme card.

Discuss the advantages and disadvantages **to the supermarket** of using the loyalty scheme card to collect data about customers and their spending patterns. [10]

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SECTION E

Read the scenario below. Questions 19–20 relate to this scenario.

Following the successful launch of the loyalty scheme, a monthly newsletter is to be created for loyalty scheme members. Two members of the project team have been given four weeks to create the first edition of a 16-page newsletter for the supermarket. Desktop publishing (DTP) software will be used to create the newsletter.

19 (a) Identify and explain **one** reason why the project team may **not** use project management software to plan the creation of the monthly newsletter.

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(b) Explain **two** reasons why DTP software would be the **most suitable** application for creating the monthly newsletter.

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..... [4]

20 (a) Explain **one positive** impact **on the supermarket** of distributing information to customers through the monthly newsletter.

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..... [3]

The supermarket asks customers to send in short stories they have written for publication in the monthly newsletter.

(b) (i) Identify **one** piece of legislation that will protect customers when their stories are published in the monthly newsletter.

..... [1]

(ii) State how the piece of legislation you have identified in **part (b)(i)** will protect customers.

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..... [1]

END OF QUESTION PAPER

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