



Please check the examination details below before entering your candidate information

Candidate surname

Other names

Centre Number

Learner ID

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T Level Technical Qualification in Digital Production, Design and Development (Level 3)**Time** 2 hours 30 minutes**Paper
reference****19537****Core
PAPER 2: The Business Environment****You do not need any other materials.**

Total Marks

Instructions

- Use **black** ink or a ball-point pen.
- **Fill in the boxes** at the top of this page with your name, centre number and Pearson learner ID.
- There are two sections in this question paper. Answer **all** questions in Section A and Section B.
- Answer the questions in the spaces provided.
– *there may be more space than you need.*

Information

- The total mark for this paper is 100.
- The marks for **each** question are shown in brackets.
– *use this as a guide to how much time to spend on each question.*

Advice

- Read each question carefully before you start to answer it.
- Try to answer every question.
- Check your answers if you have time at the end.

Turn over ►

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P 7 1 4 8 8 A 0 1 2 0



SECTION A

Answer ALL questions. Write your answers in the spaces provided.

- 1 (a) State **two** ways digital systems are used to add value to a company.

(2)

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- (b) Name **three** technical threats to data.

(3)

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(Total for Question 1 = 5 marks)



- 2 A video game development company wishes to set up a **wired** local area network of five personal computers to promote its newest game to a client.

Explain **two** benefits of using a star topology for this network.

1

2

(Total for Question 2 = 4 marks)

- 3 A new system is being designed that will allow customers to purchase cinema tickets online. When a ticket is purchased, the user will reserve a seat for their chosen viewing.

(a) Explain why a batch operating system would **not** be an appropriate choice for the cinema booking system.

(2)

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(b) The cinema collects payments for refreshments using a contactless card reader.

Explain **one** suitable operating system for the card reader.

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(c) Describe how a security breach in the cinema booking system could impact customers.

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(Total for Question 3 = 6 marks)

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4 A new system for booking driving tests is being prototyped.

Explain **two** user characteristics that would be considered when designing the system.

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(Total for Question 4 = 4 marks)



P 7 1 4 8 8 A 0 5 2 0

5 Describe **two** ways that anti-virus software protects computer systems and their data.

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(Total for Question 5 = 4 marks)

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7 Explain **one** difference between Network Attached Storage (NAS) and Storage Area Network (SAN).

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(Total for Question 7 = 2 marks)

8 A firm of solicitors is installing a new thin client network, which would be used by 10 users.

Evaluate the suitability of a thin client network for use in this office environment.

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(Total for Question 8 = 9 marks)

TOTAL FOR SECTION A = 40 MARKS



SECTION B

Answer ALL questions. Write your answers in the spaces provided.

- 9** Developers are designing a network for a hospital.

The network will allow doctors to access patients' medical records. It will consist of a small number of machines that will be placed in patient wards.

- (a) The hospital is concerned about data security.

Explain why limiting the number of devices would help improve the security of the network.

(3)

- (b) Describe how the security of the network could be tested.

(2)

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(c) One risk to the hospital of using digital systems is a security breach.

Explain **two other** potential risks to the hospital of using digital systems.

(4)

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(d) The network makes use of data packets.

Discuss the benefits of packet switching when transmitting data over the hospital network.

(6)

(Total for Question 9 = 15 marks)



P 7 1 4 8 8 A 0 1 1 2 0

10 A fruit wholesaler wishes to improve its digital systems.

The manager of the warehouse has a desktop computer in his office which stores customer and staff details in separate data files.

Customers phone through their orders, and warehouse staff process the orders by placing the relevant boxes of fruit into a trolley.

At the end of every day a member of staff is tasked with walking through the warehouse to see which items are low on stock.

- (a) The manager's desktop computer contains both a solid state drive (SSD) and a magnetic hard disk drive (HDD).

Explain why the operating system (OS) would be stored on the SSD and staff details on the HDD.

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(b) Explain **two** potential physical vulnerabilities that might occur if a second computer was installed in the warehouse.

(4)

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(c) It is a legal requirement that employee details are kept confidential.

Explain **one other** reason why the manager would want to keep employee details confidential.

(3)

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(d) The company wishes to install an automated stock control system.

Evaluate the potential impact the new system could have on the company.

(9)

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(Total for Question 10 = 20 marks)



- 11** A new digital system is being developed that will be used to gather details about passengers using trams in a large city.

Paper questionnaires will be handed out to passengers in the tram carriages.

Passengers will be asked to complete the questionnaires and to post them into boxes left in each carriage.

The data from the questionnaires will be stored on a server.

- (a) Details from the completed questionnaires will be manually entered onto the system by a team of employees.

Describe **two** ways in which the quality of data input to the system can be assured.

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- (b) The tram company wishes to use an online data analysis package to analyse the questionnaire responses.

Describe how an application programming interface (API) could be used to manage data sharing between the data analysis package and its server.

(3)

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- (c) Describe how the collected data could be protected against threats from malicious employees.

(3)

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(d) The questionnaire asks for the customers' home postcode.

Describe **one** way that the company may make use of this data.

(3)

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(e) The developers of the system are unsure of the method that they will use to store this data.

Evaluate the use of both file based and directory based structures to store data.

(12)

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(Total for Question 11 = 25 marks)

TOTAL FOR SECTION B = 60 MARKS
TOTAL FOR PAPER = 100 MARKS



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