T·LEVELS | ✦ Institute for Apprenticeships & Technical Education

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 ▶

SECTION A

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

1 (a) Explain what is meant by a business that provides a product.

(2)

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(b) Name **two** layers of the 4 layer TCP/IP model.

(2)

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2 ....

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(Total for Question 1 = 4 marks)

2 (a) Name **two** items of information that a company would wish to keep private and confidential.

(2)

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(b) Explain **two technical** threats to digital systems.

(4)

1 ....

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(Total for Question 2 = 6 marks)

P 7 4 6 8 1 A 0 3 2 4

3 (a) Describe how a device may be connected to the internet of things (IoT).

(4)

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(b) Explain **two** characteristics of Random Access Memory (RAM).

(4)

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(c) Describe how data may be transformed into information.

(2)

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(Total for Question 3 = 10 marks)

4 A cyber security company is developing a new anti-virus tool.

Explain **two** reasons why the company would use virtual environments to develop and test this new tool.

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(Total for Question 4 = 4 marks)

P 7 4 6 8 1 A 0 6 2 4

5 *SuperShoes* designs and creates leisure footwear.

Explain **two** ways *SuperShoes* could use digital tools in the design of new products.

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2 ....

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(Total for Question 5 = 4 marks)

P 7 4 6 8 1 A 0 7 2 4

6 Explain **one** potential risk to an organisation of the use of digital technology.

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(Total for Question 6 = 3 marks)

P 7 4 6 8 1 A 0 8 2 4

7 Evaluate the use of Data Analysis Tools and their use in business.

P 7 4 6 8 1 A 0 9 2 4

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(Total for Question 7 = 9 marks)

TOTAL FOR SECTION A = 40 MARKS

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

8 A supermarket wants to upgrade its digital systems.

It wishes to move away from a desktop application-based system to a system that uses a cloud environment.

(a) Explain **two** ways that this new system will be able to support the key areas of organisation in the supermarket.

(4)

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(b) Describe how a pilot changeover strategy could be used.

(3)

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(c) Explain **one** way that the new cloud-based system could meet user needs.

(2)

(d) Discuss how Data as a Service (DaaS) could be used by the supermarket.

(6)

(Total for Question 8 = 15 marks)

P 7 4 6 8 1 A 0 1 3 2 4

9 A leisure centre wishes to install a new digitised management system.

Functions of the new system include storing member details and allowing members to pay for fitness classes.

(a) The change was triggered by a wish to add new features to improve the customer experience.

Describe **two other** factors that could trigger change.

(4)

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(b) Explain **two** potential benefits to leisure centre stakeholders that this new system could provide.

(4)

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(c) Explain why it is important to ensure that this new system is resilient.

(3)

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(d) Evaluate the risk of **human threats** to the new leisure centre system.

Your evaluation should include:

- possible threats to the system

- the severity of each threat

- the likelihood of each threat

- a conclusion as to which threat would be of most concern to the leisure centre.

(9)

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(Total for Question 9 = 20 marks)

P 7 4 6 8 1 A 0 1 7 2 4

10 A retailer is developing a new online shopping system.

Customers can log into their accounts to search for items and place orders.

(a) Describe **two ways** in which data may be generated by the new online shopping system.

(4)

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(b) A conceptual data model has been designed. The model contains these entities:

- Customer.

- Item.

Describe how these entities could be linked together.

(3)

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(c) When a customer searches for an item, the server sends information about the product back to the client as a JSON file.

Explain why a JSON file is used in this situation.

(3)

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P 7 4 6 8 1 A 0 1 9 2 4

(d) The new system will use RAID 1.

Describe how RAID 1 stores data.

(3)

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(e) The developers of the system wish to use multi-factor authentication methods to secure user accounts.

They must choose between either possession-based systems or biometric systems.

Evaluate the suitability of using these methods to secure user accounts.

(12)

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(Total for Question 10 = 25 marks)

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

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