

**T Level Technical Qualification in Digital Business Services
(603/6902/4)**

Route Core and Pathway (Paper B)

Paper number: **P002243**Time allowed: **2 hours**Assessment date: **Tuesday 12 December 2023**Time: **1:00pm – 3:00pm****Student instructions**

- Use black ink.
- Fill in the boxes at the bottom of this page.
- Answer **all** questions.
- Read each question carefully.
- You **must** write your responses in the spaces provided. There may be more space than you need.
- You may do rough work in this answer book. Cross through any work you do not wish to be marked.
- If you use a supplementary answer booklet, you must add your student name, student number and provider number to the front cover of the booklet. Insert your supplementary answer booklet inside this question paper at the end of your exam.

Student information

- The marks available for each question are shown in brackets. This is to help you decide how long to spend on each question.
- The maximum mark for this paper is 106 (including 6 for the quality of written communication (QWC) and use of specialist terminology).
- In questions **16** and **24**, you will be assessed on the QWC and use of specialist terminology.
- You may use a calculator.

Do not turn over until the invigilator tells you to do so.**Please complete / check your details below**

Student Name:

Provider Name:

Student Number:

Provider Number:



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For the multiple-choice questions, write **A, B, C** or **D** in the answer space. Do **not** circle **A, B, C** or **D** in the question.

For example:

Answer **C**

If you change your mind about an answer, you must put a cross through your original answer and then write your new answer next to it.

For example:

Answer ~~A~~ **B**

Section A: tools and testing

This section is worth 22 marks.

Answer **all** questions in the spaces provided.

1 Which **one** of the following is a purpose of testing digital components? [1 mark]

- A impact assessment
- B port scanning
- C prioritise the causes
- D risk management

Answer _____

2 State **one** project management methodology. [1 mark]



3 A community garden project is creating a beginners' gardening course with five members producing the course content. As part of the course creation process, the five members are reviewing and editing course materials to ensure they are accurate and easy to understand. They currently print out sections and give written feedback to each other. One member suggested using a mark-up tool.

(a) Describe **one** purpose of a mark-up tool. **[1 mark]**

(b) Explain **one** benefit to the community garden group of using a mark-up tool to provide feedback. **[2 marks]**

Please turn over for next question



4 Mia and Ayesha run a car wrap business where Mia designs and prints the vinyl wrap, while Ayesha applies it to the cars. They currently charge a flat fee for the service and are profitable but are unsure of their costs. They plan to use a budget sheet to better understand their costs.

(a) Describe **one** purpose of a budget sheet. **[1 mark]**

(b) Explain **one** way a budget sheet would help Ayesha and Mia to understand how much each step of their process costs. **[2 marks]**



5 A website design company has created a digital feedback form for a local business. Customers of the local business are experiencing difficulties filling certain sections of the form and submitting it.

(a) Identify **two** processes of root cause analysis.

[2 marks]

(b) Explain **two** ways the company can use root cause analysis to resolve this issue.

[4 marks]



6 WPSV Ltd is a business that offers cyber security services to its clients. It tests its clients' IT infrastructures to identify any areas of their systems that hackers could access to steal their data.

Explain **one** reason why WPSV Ltd would use penetration testing.

[2 marks]

7 Moupow Design Studios Ltd specialises in creating apps for trade businesses like plumbers and electricians.

It has been approached by a plumbing company to build an app that uses augmented reality (AR) for designing and visualising a new bathroom. To ensure its success, Moupow Design Studios Ltd is planning to conduct concept, usability, and stress testing before launching it to customers.

Assess the importance of Moupow Design Studios Ltd using **one** of these testing methods when developing the new bathroom design app for the plumbing business.

[3 marks]



8 Axeworth Entertainment Ltd specialises in unique social activities for clients, such as axe throwing, tank driving and hot tub canal boats.

It is now developing a new activity that lets customers graffiti a wall in a warehouse located 50 miles from its main office. To facilitate collaboration with the owner, Axeworth Entertainment Ltd is exploring the use of a digital workspace.

Discuss ways that Axeworth Entertainment Ltd could utilise a digital workspace to enable collaborative working with the warehouse owner to develop its new activity.

Your response must include reasoned judgements and conclusions.

[3 marks]

Please turn over for next section



Section B: legislation and security

This section is worth 38 marks, plus 3 marks for QWC and use of specialist terminology. Answer **all** questions in the spaces provided.

- 9** State **one** UK law that businesses operating online need to adhere to. **[1 mark]**

- 10** State **one** of the National Cyber Security Centre's (NCSC) Cyber Essentials. **[1 mark]**

- 11** Freddie's Equine Services Ltd currently provides boarding stables and horse-riding lessons. Customers are requesting a mobile app to book lessons and services, but the owner lacks the knowledge to make one. The business needs some guidance on what to consider before implementing digital services. It has been advised that firstly it should contact digital professional organisations that can provide information on any industry standards that it should be aware of.

- (a)** Identify **two** professional organisations that can offer guidance and support on industry standards. **[2 marks]**

- (b)** Explain how **one** of these organisations can help Freddie's Equine Services Ltd to meet industry standards. **[2 marks]**



12 Mug's Paradise is a coffee shop that offers free Wi-Fi to all its customers. At present, customers need to connect to the Mug's Paradise Wi-Fi, and they can then surf the internet.

(a) Identify **one** threat posed by allowing customers password free access to the Wi-Fi. **[1 mark]**

(b) Explain **two** ways this threat could impact Mug's Paradise or its customers. **[4 marks]**



13 Hounds R Us is a mobile pet grooming service that offers grooming services at customers' homes. A deposit is collected upon booking, while the remaining balance is paid after the appointment using chip and pin machines. Poor mobile reception in some areas forces the business to use customers' Wi-Fi to take payments, which exposes it to potential malware attacks from hackers.

(a) State **two** types of malware. **[2 marks]**

(b) Using **two** examples, explain the potential impact of malware that could be installed via the customers' Wi-Fi networks. **[4 marks]**



14 RAHS Ltd provides outsourced human resource services to various industries, including recruitment and induction of new employees, and maintenance of employee records. As the data processor, it handles personal data for its clients, who keep control over the information and its usage.

Assess the impact on RAHS Ltd if sensitive data is not kept confidential.

[3 marks]

Please turn over for next question



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15 Shady's Eyewear is an online business that offers custom made glasses and sunglasses. Customers can choose standard lenses or upload their prescription for bespoke lenses. The website has a password-protected area where customers can save personal information, such as address and payment details for future use.

Assess the importance of ensuring that Shady's Eyewear is compliant with the legislation that applies when operating online.

[6 marks]



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16

Jenkin’s Surf Supplies is a wholesale business that currently sells surf products to retailers only. However, it is moving to a new building and plans to start selling directly to the public as well.

The new premises will have a custom-built network to meet its needs and some staff will work on-site while others will access the network remotely. The company is considering allowing both personal and business devices to access the network.

Assess which processes and protocols Jenkin’s Surf Supplies need to implement to ensure internet security assurance.

Your response must include reasoned judgements and conclusions.

[12 marks, plus 3 marks for QWC]



Section C: digital analysis and data

This section is worth 40 marks, plus 3 marks for QWC and use of specialist terminology. Answer **all** questions in the spaces provided.

17 State **one** data type. **[1 mark]**

18 Kicks MA & J is a company that produces martial arts equipment and provides martial arts classes at four locations known as dojos.

It had a data loss scare when its network attached storage (NAS) drive failed, prompting it to invest in improved data storage and backup procedures to avoid a repeat of the incident.

(a) State **one** other method of storing data that Kicks MA & J could use to safely store its data. **[1 mark]**

(b) Explain **one** way the stated storage method would prevent future data loss issues for Kicks MA & J. **[2 marks]**

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19 A smoothie bar plans to host an online competition to promote its business. The competition will consist of a five-question multiple-choice quiz, with entrants only able to advance to the next question if they answer the current question correctly. The smoothie bar seeks to randomly select a winner and has been advised that an algorithm can accomplish this.

(a) State **one** characteristic of an algorithm. **[1 mark]**

(b) Describe **one** way the stated characteristic would help the smoothie bar create its promotion. **[2 marks]**

Please turn over for next question



20 A computing teacher at a local school is starting to teach coding to students. She has decided that if she teaches them algorithm design first it will help the students gain a better understanding of coding. To help her students, she has created a simple algorithm that multiplies two numbers and then prints the results.

(a) State **two** tools that can be used for algorithm design. **[2 marks]**

(b) Explain **one** way that each of the tools identified in part **(a)** could help the students to understand how their algorithms work. **[4 marks]**



21 N2I Ltd is a market research company that creates customised reports for industries and businesses, using both existing and newly gathered data. It also offers personalised services to prepare reports on specific industry sectors and individual businesses, which involve collecting fresh data alongside existing information.

(a) State **two** external sources of data.

[2 marks]

(b) For each identified external source of data in part **(a)** explain how N2I Ltd can use these for its bespoke service reports.

[4 marks]



22 Apprentice2Go (A2G) provides training to businesses. Training can include short sessions and formal qualifications. It designs, delivers and assesses these programmes.

A2G also collects and stores user data for its apprentices to ensure they are registered for the right course and receive certificates.

Discuss the importance of A2G undertaking regular maintenance of its user data.

Your response must include reasoned judgements and conclusions.

[3 marks]

23 Seats Up Ltd design and manufacture airline seats, offering a range of seat types and options to meet client needs.

The company recently implemented key performance indicators (KPIs) and discovered significant variability in the time required to build each seat, even within the same style. Despite attempting manual data analysis, the large and diverse data set has posed challenges for management.

Discuss how machine learning algorithms could help Seats Up Ltd analyse the data it is collecting.

Your response must include reasoned judgements and conclusions.

[6 marks]



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24

Count with Us Ltd is an accounting firm with specialised departments for different types of businesses.

It grew by acquiring competitors and using their data systems. However, this has resulted in different departments having different ways of working; requiring retraining of staff and making it challenging to find cover for absences.

Evaluate the importance to Count with Us Ltd of having a consistent approach to the format and storage of its data to reduce the current issues it is having.

Your response must include reasoned judgements and conclusions.

[12 marks, plus 3 marks for QWC]



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Owner: Head of Assessment Design

To be completed by the examiner			
Question	Mark	Question	Mark
1		14	
2		15	
3 (a)		16	
3 (b)		17	
4 (a)		18 (a)	
4 (b)		18 (b)	
5 (a)		19 (a)	
5 (b)		19 (b)	
6		20 (a)	
7		20 (b)	
8		21 (a)	
9		21 (b)	
10		22	
11 (a)		23	
11 (b)		24	
12 (a)			
12 (b)			
13 (a)			
13 (b)			
		TOTAL MARK	

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