T Level Technical Qualification in Digital Support Services (603/6901/2)

Route Core and Pathway (Paper A)

Paper number: **P002266**   Time allowed: **2 hours**
Assessment date: **Wednesday 6 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 and use of specialist terminology).
- In questions **10** and **20**, you will be assessed on the quality of your written communication (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:

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 ☒ **B**

Section A: Business context and culture

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

1   Identify **two** types of hacker.

[2 marks]

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2   Identify **two** potential impacts of increased reliance on digital technology on society.

[2 marks]

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3   Isaac has been hired to deliver training to human resource managers. The training is aimed at enabling human resource managers to better support their staff in the use of digital technology by offering information about reporting mechanisms and how to request support. The main focus is on mitigation techniques that can reduce the impact of unsafe or inappropriate use of digital technology.

(a)   Identify **one** mitigation technique Isaac could cover.

[1 mark]

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(b)   Explain **one** impact this mitigation technique could have on the staff which managers interact with.

[2 marks]

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Please turn over for the next question

4 A company is moving several business processes to the cloud. Feedback from a focus group of customers included concerns about risks that might affect them. The most common areas of risk highlighted by the focus group were:

- loss of privacy
- non-compliance.

(a) Describe **each** of the risks highlighted by the focus group.

[2 marks]

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(b) Explain the potential impact of **one** of these risks.

[2 marks]

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5 A marketing agency has employed several young people on an internship. The interns will be required to write blog articles for the agency website. It is likely that marketing interns would work at their computer for long periods to complete their work tasks.

The marketing agency are planning for the induction of the interns and will include a session on the impact of unsafe or inappropriate use of digital technology.

Explain **one** way that unsafe or inappropriate use of digital technology could impact the marketing interns.

[2 marks]

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6 Lily runs a business which offers cloud-based storage solutions to customers. A recent change in law has meant that personal information stored must be processed locally rather than in the cloud. To adapt to this change in law, Lily's business must introduce a new system.

Explain **one** step Lily could take in planning to respond to the change effectively.

[2 marks]

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7   Olawale runs an IT support services business that offers technical support to small and medium enterprises. He is now looking to grow the business and would like to add some larger organisations to his customer base.

Before planning how the business can support larger organisations, Olawale would like to better understand the key factors which can influence the business environment.

Explain why Olawale should consider each of the following key factors:

- economic factors
- legal factors.

[4 marks]

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8 Mehwish is the owner of a large sports retail store. She is due to complete the purchase of an international sports brand with the aim of growing the retail store internationally. Mehwish is planning how to manage the change that will come with the purchase of the sports brand. She would like to make sure existing staff feel up to date with the new business structure.

Discuss how Mehwish could manage the impact on staff during the growth of the business.

Your response must include reasoned judgements and conclusions.

[3 marks]

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Please turn over for the next question

9   A large organisation is planning a major change to their business operation. This change will primarily focus on the replacement of their customer relationship management (CRM) system used throughout the sales and operations process.

The project manager would like to ensure that the change in system does not impact negatively on the organisation. She would like to run a workshop on components of technical change management that focuses on:

- the importance of understanding the risks of making such a change
- the purpose of the change advisory board.

Assess why it is important to consider **each** component of technical change management when making such a major change.

[6 marks]

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Please turn over for the next question

10 Emily runs a boutique bakery in London. Her business was recently featured in a popular magazine and is now experiencing a very high demand. Emily does not want to open another physical store, so she plans to digitalise her business.

Evaluate how digitalisation could add value to Emily's business.

Your response must include reasoned judgements and conclusions.

[12 marks, plus 3 marks for QWC]

Please turn over for the next section.

Section B: Diversity, inclusion and digital environments

This section is worth 40 marks, plus 3 marks for QWC and use of specialist terminology.

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

11   Describe **two** benefits of cloud computing.

[2 marks]

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12   Identify **two** benefits of diversity and inclusion to businesses.

[2 marks]

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13   Callum runs an IT consultancy business. He is delivering a talk to small businesses offering online financial advice. He will cover the importance of storing data securely online and the benefits this can offer to organisations.

Explain **one** reason why storing data securely is important for the business to which Callum is delivering.

[2 marks]

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14 George is building a new computer to play video games and to edit high-definition video.

He is currently planning the build of the new computer and has reached out for advice on the following components:

- graphics processor unit (GPU)
- fans.

(a) Describe the role of **each** of the components named above within a computer system.

[2 marks]

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(b) Explain how important **one** of these components would be in George's new computer.

[2 marks]

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15 Milena is running a workshop at her local university on the positive impact that digital inclusion can have. The attendees of the workshop will be students that are looking to go into digital careers.

Explain what she could include in the workshop to promote how **each** of the following are positive impacts of digital inclusion:

- increased career opportunities
- enhanced access and connectivity to digital technology.

[4 marks]

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16 Gemma runs a large accountancy firm and is in the process of planning an IT equipment update. The firm has several branch offices that are supported by one central IT team at head office. Gemma has been advised by a consultant that other firms have achieved success moving to virtual computer systems.

She is particularly interested to know more about how virtual computer systems would allow the IT team to support the wider firm more effectively.

Explain **one** way that virtual computing systems could help the IT team provide better support.

[2 marks]

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17 Paige is troubleshooting a network issue that is preventing a host on her local network being able to communicate with a host on another network. Communication between hosts on the same network is working fine.

She is currently researching the open system interconnection (OSI) network reference model. She is unsure which layer of the OSI model the problem relates to.

(a) Identify **which** layer of the OSI model the problem relates to.

[1 mark]

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_____

(b) Explain how this layer relates to network communication.

[2 marks]

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Please turn over for the next question

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18 Safia is the managing director of a software company that has a small IT service team. This team currently look after the IT hardware and services and provide technical advice to external customers.

Feedback from customers has highlighted issues with the support being offered to them. Several have complained that the support team do not respond to support requests in a timely manner.

Safia would like to move the ticketing system to the cloud for improved performance and to remove the maintenance burden from the IT support team.

She is considering which cloud service would be most appropriate from:

- infrastructure as a service (IaaS)
- platform as a service (PaaS)
- software as a service (SaaS).

Assess how one of these cloud services would be suitable for Safia's company.

[3 marks]

19 Research has suggested that there is a demographic imbalance in the digital sector. Demographic imbalance includes poverty, poor health, low levels of education and gender inequality.

Discuss **two** approaches that could be used by organisations in the digital sector to address demographic imbalance.

[6 marks]

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20 BulbusNet Ltd is an organisation which provides hosting services for customers.

The BulbusNet Ltd network was recently the target of a cyberattack which resulted in a lengthy service outage for customers and the loss of confidential corporate documentation. An early report following the attack points to issues around the hardware and software infrastructure of the network, including out of date operating systems and uncontrolled wireless network access. Customers are not happy, and the organisation is worried about their reputation following the cyberattack.

Evaluate the impacts that security improvements could have on BulbusNet Ltd and their clients.

Your response must include reasoned judgements and conclusions.

[12 marks, plus 3 marks for QWC]

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Section C: Learning and planning

This section is worth 20 marks.
Answer **all** questions in the spaces provided.

21   Identify **one** example of a reflection technique.

[1 mark]

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22   Describe **one** principle of project planning which is used to identify project aims
        and objectives.

[1 mark]

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23   Richard is developing a new application which will allow his customers to host
        high-quality image and video content. The project is early in the planning stage
        and Richard is holding a meeting with the project team on the consequences of
        ineffective project planning. A launch window has been provided to customers
        that have already signed up for the new application.

(a)   Identify **one** consequence of ineffective project planning.

[1 mark]

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(b)   Explain how the identified consequence of ineffective project planning could
        have an impact on the development of Richard's app.

[2 marks]

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24 Fran works as an IT support consultant who offers advice on network security to small and medium enterprises. To appeal to new customers, Fran is putting together a booklet on protecting against the most common network threats and would like to ensure that the booklet contains up to date information from reliable sources.

(a) Give **one** reliability or validity factor.

[1 mark]

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(b) Explain why Fran should consider this factor when researching information for her booklet.

[2 marks]

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Please turn over for the next question

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25 Bindi runs a logistics company which uses vehicles to deliver consumer electronics, fresh food and clothing to customers across the UK. A recent survey has highlighted that a large proportion of customers feel that deliveries are rarely on time and there is little communication to inform customers of delays. There has been an increase in complaints about spoiled fresh food being delivered to customers, increasing food waste.

Bindi is interested in how she could use artificial intelligence (AI) to improve the quality of service to her customers.

Assess the impact that AI could have on the logistics company.

[3 marks]

26 Erin runs a successful training company. The company is relocating to a new office to allow for increased headcount and future growth plans. This project will involve installing and configuring the new office network, moving departments to the new office in a phased manner, and decommissioning the old office site.

Erin has assembled a project team and is meeting with them to discuss project planning techniques that could be used to ensure that the office move project is a success.

During the meeting they discuss the following techniques:

- programme evaluation review technique (PERT)
- critical path analysis (CPA)
- must have, should have, could have, won't have (MoSCoW)

Discuss the impact that **one** project planning technique could have on the success of Erin's project.

Your response must include reasoned judgements and conclusions.

[3 marks]

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Please turn over

27 Natalia is currently working as a project manager on a development project with a new client. The client requires a new helpdesk ticketing system to be built to replace their current ticketing system. The managing director of the client has provided a vague outline of what they need.

Natalia wants to employ the design thinking techniques to better understand the needs of the client.

(a) State **one** design thinking technique.

[1 mark]

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(b) Explain how the stated technique can help Natalia when researching requirements for the project.

[2 marks]

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28 Tanveer is a project manager for a new systems development project, developing a new mobile app for a building merchant. The mobile app will allow customers to order products for collection in store from their smart device.

The last project undertaken by Tanveer's team was not successful. To ensure this is not repeated he would like to focus on quality management.

(a) Identify **one** aspect of quality management.

[1 mark]

(b) Explain how Tanveer could use this aspect of quality management to help ensure his project is a success.

[2 marks]

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Document information

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Owner: Head of Assessment Design

To be completed by the examiner			
Question	Mark	Question	Mark
1		16	
2		17 (a)	
3 (a)		17 (b)	
3 (b)		18	
4 (a)		19	
4 (b)		20	
5		21	
6		22	
7		23 (a)	
8		23 (b)	
9		24 (a)	
10		24 (b)	
11		25	
12		26	
13		27 (a)	
14 (a)		27 (b)	
14 (b)		28 (a)	
15		28 (b)	
		TOTAL MARK	