

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

## Route Core and Pathway

Paper A

Paper number: P00XXXXX

**Specimen 2020**

**Morning/Afternoon**

**Time allowed:** 2 hours

### Student instructions

- Use black or blue 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.

### 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 **8** and **16**, you will be assessed on your quality of written communication (QWC) and use of specialist terminology.
- You may use a calculator.

Please complete the details below clearly and in **BLOCK CAPITALS**.

Student name \_\_\_\_\_

Provider name \_\_\_\_\_

Student number  Provider number

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

**Do not turn over until the invigilator tells you to do so.**

**Section A: Business context and culture**

**BARCODE - TQ/EC/CKU/PAPERA**

This section is worth 41 marks, plus 3 marks for QWC and use of specialist terminology.

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

- 1 Unsafe or inappropriate use of digital technology can affect a person's health. Describe **one** action that could reduce this risk.

[2 marks]

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- 2 Businesses have a range of different internal stakeholders.

Name **three** different internal stakeholders and briefly describe how **each** stakeholder you have named could influence the way a digital business operates.

[3 marks]

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**3** A company has recently moved to working in 3 locations, each of which has limited space. Staff must regularly travel between them for meetings. Their IT equipment is old and needs to be updated.

The company wants to reduce operating costs and increase productivity.

They are considering whether remote working would support this.

Describe **four** possible impacts on the company of moving to remote working.

[4 marks]

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**4** A local florist is developing a website to start selling their products online instead of from their high street shop. They have a target to increase their profits by 50%.

Discuss **four** ways in which a digital approach could help them to meet their target.

[4 marks]

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5 A digital marketing agency is completing a major update of its customer content management system.

Describe **both** of the following processes:

- roll back planning
- documenting.

Explain why each process could be important to the business when they integrate new systems.

[4 marks]

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6 A business is considering changes to their digital systems to reduce their carbon footprint, become more eco-friendly and reduce operational costs. These changes require them to install a range of power efficient components into their digital infrastructure. These new components will have to operate effectively with the existing components, to avoid disruption to the services used by staff.

a) Describe **three** preparation and planning tasks that would facilitate these changes.

b) Describe **three** operational tasks that would facilitate these changes.

[6 marks]

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**Please turn over for the next question.**

SAMPLE

7

A UK organisation is looking for new markets outside the UK to increase their sales. The organisation specialises in high-end technological devices such as the latest smartphones and tablets.

Discuss **three** economic factors which could impact the business entering markets outside of the UK and how they could be mitigated.

[6 marks]

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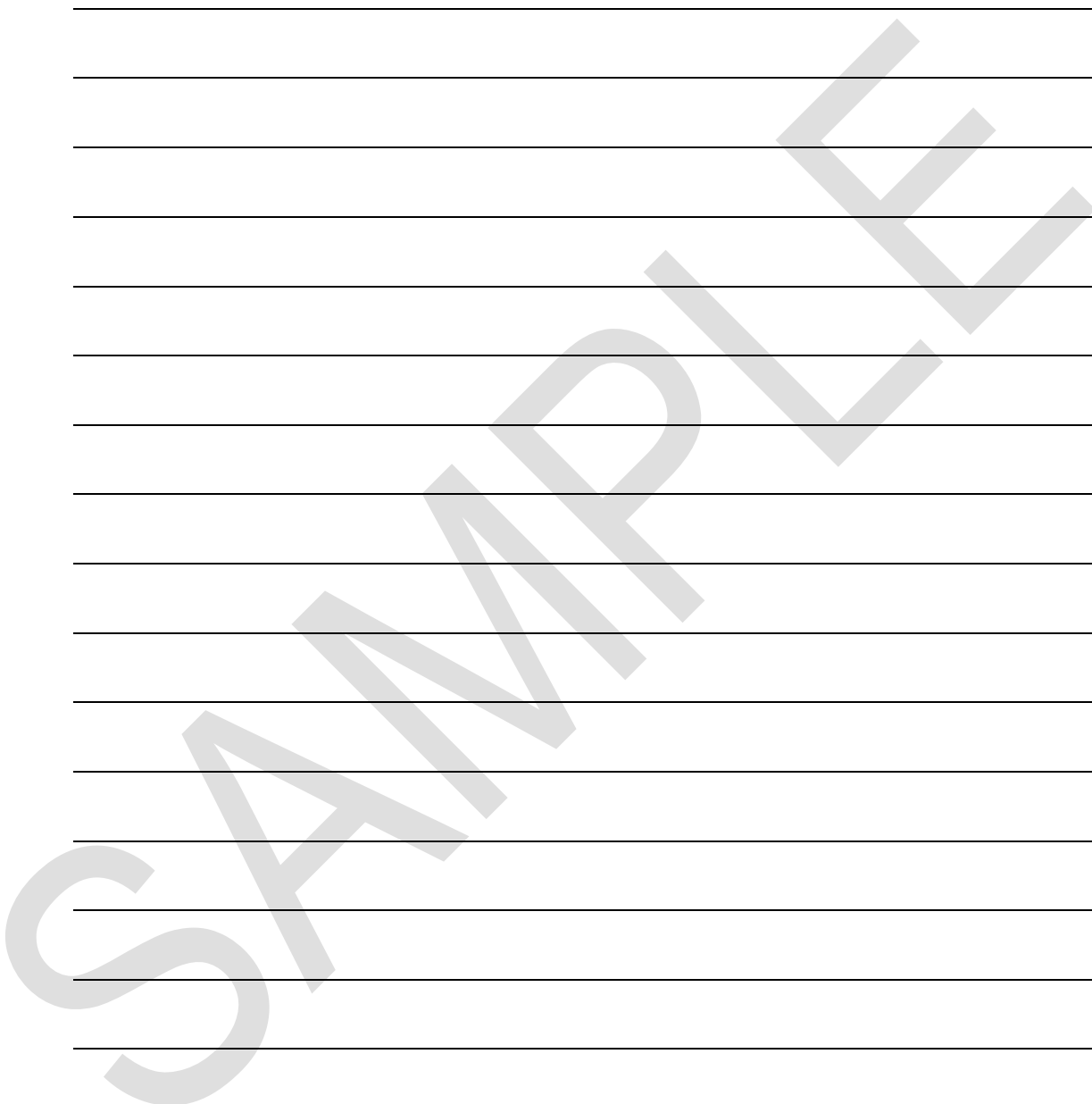
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SAMPLE

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Please turn over for the next question.**

8

A local community sports club has set up a website for customers to book sessions and make payments. Customers must book through an unsecured area of the website. To make a booking, customers must enter their personal details. This information is then stored in a spreadsheet that is accessible by all sports club staff. There is no option for customers to make bookings in person. Discuss the risks of the booking process and evaluate the possible impacts of these risks on the sports club and their customers.

[12 marks, plus 3 for QWC]

Horizontal lines for writing the answer.

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SAMPLE

## Section B: Diversity, inclusion and digital environments

This section is worth 37 marks, plus 3 marks for QWC and use of specialist terminology.

Answer all questions in the spaces provided.

- 9 Jane runs a marketing consultancy business from home. She regularly uses a range of online tools to facilitate online banking, video conferencing and online collaborative working.

Jane has a poor internet connection because of where she lives.

Explain **two** ways poor internet connection could have an adverse effect on Jane's business.

[2 marks]

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- 10 The table below shows a list of descriptions.

Select the number of the correct description for each of the below:

- router

- switch

	Description
1	A device that broadcasts network packets to all connected devices
2	A device that sends network packets directly to intended device using MAC address
3	A device that interconnects different networks and subnets
4	A device that provides network access to wireless clients

[2 marks]

11 An algorithm design analyses people's race, employment status and credit rating to determine whether they should be approved for a loan.

State which piece of UK legislation this algorithm could be in breach of, and briefly describe why it might breach that legislation.

[3 marks]

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12 A local shop has donated two PCs and a printer to a local library. The library would like to use this equipment to create a network. The network will support those in the community that do not have access to the internet or computers at home.

Aims of the project include:

- help with job search and job applications
- educational activities
- ensuring the online safety of community members using the computers.

The library wants to keep the computers safe from cyber attacks and misuse.

a) Explain **two** ways in which the library could use hardware components to establish the network between the PCs and printer and allow internet access and printing in a secure way.

b) Explain **two** ways in which the library could use software to achieve the aims of the project.

[4 marks]

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13

Harmeet is the managing director of a local gym. He is planning to expand into new locations. He wants to learn about ways that the cloud can provide efficiencies of scale.

Explain **two** ways in which cloud computing could benefit Harmeet's business.

[4 marks]

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14

- a) Describe the functionality of the routing protocols RIP **and** OSPF.
- b) A small, single-site business is planning to open new sites. The business is considering which routing protocol to use.

Evaluate whether RIP or OSPF would be the most effective protocol.

[4 marks]

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16

You are a digital support specialist working within the IT department of a local college. Recently the domain controller server went offline, causing a major network outage.

The college requires that the network must be available 24/7 and allow for staff and students to access services such as email from home and mobile devices. Additionally, users must be able to access the full range of software that the college has available and be able to create, open, edit and save documents, along with uploading documents to the college network.

Analyse the college's requirements and make justified recommendations to the board of directors with respect to their digital infrastructure.

**[12 marks, plus 3 marks for QWC]**

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## Section C: Learning and planning

This section is worth 22 marks.

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

17 You are troubleshooting a problem.

State **one** advantage and **one** disadvantage of using user forums as a source of information to help you.

[2 marks]

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18 Describe **two** ways in which ineffective project planning can lead to rising costs.

[2 marks]

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19 A bank has received a number of complaints from customers about the time it takes to get help online. The bank thinks this is mainly due to a staff shortage and is considering using artificial intelligence (AI) to solve the problem.

Define AI and describe the purpose of AI.

Explain **two** ways AI could be used to improve customer experience with the bank.

[4 marks]

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20

John has limited mobility.

Justify how the following emerging technologies could be used to support John's health needs:

- internet of things
- virtual reality.

[4 marks]

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**Please turn over for the next question.**

SAMPLE

21

You are a project manager. You have been asked to develop a new app for mobile devices that will allow users to search for events and pay for tickets. The project owner wants the app to be ready for launch in 8 weeks. He wants customers to be able to use the app to book tickets for a nationwide series of events.

Explain how **each** of the following factors may impact on planning the development for this project:

- people and skills
- deadlines.

**[4 marks]**

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22

A small company has started a complex project for the first time. They will need to liaise with a wide range of stakeholders and complete a number of different tasks, which will involve a large number of their staff.

A member of staff has suggested that the business use a critical path analysis tool to manage the project.

Evaluate to what extent you think this approach to the project will be effective.

**[6 marks]**

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**This is the end of Paper A.**

SAMPLE

## Document information

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Owner: Head of Assessment Design

## Change History Record

Version	Description of change	Approval	Date of Issue
v1.0	Published.		2020
v1.1	NCFE rebrand.		September 2021
v1.2	Sample added as a watermark	November 2023	22 November 2023