T-LEVELS | Institute for Apprenticeships & Technical Education

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

Route Core and Pathway (Paper A)

Paper number:	**P001639**	Time allowed:	**2 hours**
Assessment date:	**Wednesday 14 June 2023**	Time:	**1:00pm – 3:00pm**

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.
- 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 **17** and **28**, 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:

Section A: Business context and culture

This section is worth 39 marks, plus 3 marks for QWC and use of specialist terminology.
Answer **all** questions in the spaces provided.

1   Give **one** business environment that sells products direct to the customer.

[1 mark]

_____

_____

2   Identify **one** mitigation technique that can reduce the impact of unsafe or
        inappropriate use of technology.

[1 mark]

_____

_____

_____

_____

3   George is giving a talk on the use of digital technology to a company that
        currently relies on face-to-face communication.

        Explain **one** way that digital technology could impact upon this company's
        culture.

[2 marks]

_____

_____

_____

_____

4 A company is launching a new set of easy-to-use smart devices. Feedback from a focus group found that 'products are really easy to use', but many 'fear there will be a loss of privacy'.

The company would like to produce an information leaflet that can be sent to those interested in the product. This would inform them about the following aspects of digital security:

- digital footprint
- surveillance.

(a) Describe **each** of these aspects of digital security.

[2 marks]

_____

_____

_____

_____

(b) Explain how **one** of these aspects of digital security would help address the focus group's concern around loss of privacy.

[2 marks]

_____

_____

_____

_____

Please turn over for the next question

5 A cloud-based service provider is launching a new product. A previous launch was not as successful as the provider had hoped. Feedback from staff indicated that they were not sure what was expected of them and were not provided with targets to aim for.

(a) Identify **two** components of SMARTER objectives.

[2 marks]

_____

_____

_____

_____

(b) Explain how **one** of the identified components of SMARTER objectives can improve the provider's chances of a successful launch.

[2 marks]

_____

_____

_____

_____

6 A training provider is moving from classroom-based to online teaching. In preparation, they are developing a virtual classroom platform.

The managing director is holding a meeting with the development team. The focus of the meeting is to understand the risks and implications that the new platform has for the business.

The meeting will focus on the following risks:

- security
- audience exclusion
- insufficient business resilience.

Explain how **one** of these risks could affect the new online classroom platform.

[2 marks]

Please turn over for the next question

7   An organisation is planning its long-term growth strategy and wants to become more environmentally aware, while also reducing the costs of their operations.

The organisation offers remote, 24/7 digital support to people with little IT experience. Moving to more eco-friendly working means that the organisation will need to change their digital infrastructure to include more power-efficient components.

Explain why **each** of the following factors should be considered when planning the new growth strategy:

- sustainability
- reduction in carbon footprint.

[4 marks]

_____

_____

_____

_____

_____

_____

_____

8 Tanveer is a specialist fashion retailer who is planning to open a new online store. He has hired a new web design apprentice who will create and manage the online store. Tanveer has warned the apprentice that there are risks to online businesses that need to be considered.

Discuss how the risk of non-compliance could have an impact on Tanveer's business.

[3 marks]

_____

_____

_____

_____

_____

_____

Please turn over for the next question

07P00163928

9   A software development company is developing a new social networking app that aims to connect users doing specific leisure activities across the world. The organisation has a reputation for developing products that are accessible to all.

The project manager would like to ensure that the team understand the importance of considering customer and end user needs when creating a successful app.

Justify why it is important for the software development company to consider the profile of their customers and end users when developing their product.

[6 marks]

This page is intentionally left blank.

Please turn over for the next question.

09P00163928

10 BuildSkills UK is a charity that provides free digital skills training to adults who are not in education, employment or training (NEET). The managing director wants to know about factors that may influence the business environment in order to create a successful 10-year business plan.

Discuss key factors that could influence the business environment of BuildSkills UK and the opportunities offered by each.

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 39 marks, plus 3 marks for QWC and use of specialist terminology.
Answer **all** questions in the spaces provided.

11   Identify **one** adverse effect on an individual when digital inclusion principles are
        not applied.

                                                                            [1 mark]

_____

_____

12   State **two** types of network.

                                                                            [2 marks]

_____

_____

_____

_____

12P00163928

13 Natalia runs an IT support company and has recently seen productivity reduce amongst staff.

Staff have told Natalia that they could work faster, but the systems they use are so slow that this is not possible.

Natalia would like to provide a more resilient digital environment to ensure system performance is always effective.

(a) Identify **two** methods of creating a resilient digital environment that Natalia could use.

[2 marks]

_____

_____

_____

_____

(b) Explain how Natalia could use **one** of the identified methods to create a resilient digital environment.

[2 marks]

_____

_____

_____

_____

Please turn over for the next question

14 AppMyLife is a mobile app developer specialising in apps that help users organise their work-life balance. Over recent years, AppMyLife has suffered from reduced sales and a shrinking user base among people from diverse backgrounds.

The board of directors is looking at the business benefits of increased diversity and inclusion in the workforce.

Explain how increased diversity and inclusion within the workforce could support AppMyLife to introduce products that are:

- innovative
- inclusive.

[4 marks]

_____

_____

_____

_____

_____

_____

_____

15 Muhammed is presenting at a conference for software development and design companies. Muhammed's presentation will focus on addressing the demographic imbalance in the digital sector. Muhammed will present on the following approaches to addressing this imbalance:

- increasing cultural awareness of different types of bias
- application of digital inclusion principles
- government initiatives
- inclusive recruitment.

Explain how **two** of these approaches can help hiring managers to address demographic imbalance in the digital sector.

[4 marks]

_____

_____

_____

_____

_____

_____

_____

Please turn over for the next question

16   A local college wants to improve the accessibility of its learning materials. To help achieve this, the principal has asked that the college provides all students with access to word processing, spreadsheet and database software. The principal would like to use cloud services to achieve this but is not sure about the service that is required.

Discuss how software as a service (SaaS) could improve the accessibility of the college's learning materials.

[3 marks]

_____

_____

_____

_____

_____

_____

17   A conference centre is hosting a conference to promote collaborative working between large businesses in the UK. It is expected that there will be over 200 attendees and several businesses will exhibit their own products. Feedback from last year's event was that the centre's network was restrictive and did not allow attendees to collaborate effectively.

(a)   Identify **one** routing protocol.

[1 mark]

_____

_____

(b)   Explain how the routing protocol identified could be used by the conference centre.

[2 marks]

_____

_____

_____

_____

18 Marco has purchased a new laptop for work projects. The laptop has no operating system (OS) installed. Marco is a graphic designer and uses popular software packages including word processing, image editing and video creation. Projects are often shared with clients, so compatibility of software is a key requirement.

Justify which OS is the most suitable for Marco to install on his laptop.

[3 marks]

_____

_____

_____

_____

_____

19 A large technology company is developing a new product. They have asked a community group with a range of needs to tell them more about their requirements.

The company is aware of the importance of considering digital inclusion in the design and development of digital products.

Analyse why the principles of digital inclusion are important when developing this new product for this group.

[3 marks]

_____

_____

_____

_____

_____

Please turn over

17P00163928

20   VirtualNet UK Ltd is an organisation that offers hosted applications to clients. Their clients are mainly small companies that want to offer digital solutions but who do not have the knowledge or ability to implement them.

A recent outage at the data centre caused systems to be down for VirtualNet UK Ltd and their clients. This led to several complaints from clients about lost revenue and security concerns.

The network manager has requested an increased budget to improve the resilience of the organisation's digital environment.

Discuss the benefits of improved resilience in the digital environment to VirtualNet UK Ltd and the impact these improvements could have on clients.

Your response must include reasoned judgements and conclusions.

[12 marks, plus 3 marks for QWC]

Please turn over

Section C: Learning and planning

This section is worth 22 marks.
Answer **all** questions in the spaces provided.

21 Give **two** factors that need to be considered when assessing the reliability and validity of a source.

[2 marks]

_____

_____

_____

22 Roma is researching language development for a university paper. The topic is new to Roma, and she would like to use digital sources of knowledge for her research.

Explain how Roma could ensure that any research she takes from forums is accurate, reliable and valid.

[2 marks]

_____

_____

_____

23 Jack is a freelance software developer working on a rapid application development (RAD) project that will allow customers to order limited edition products from their smart device.

(a) Identify **two** potential consequences of ineffective project planning on the project.

[2 marks]

_____

_____

_____

_____

(b) Explain how **one** of the identified consequences of ineffective project planning could have an impact on the software development project.

[2 marks]

_____

_____

_____

_____

Please turn over for the next question

24 Mia is developing a new digital platform for a local educational charity that will launch at the start of the new school year. The project is early in the planning stage and Mia is looking to understand the aims and objectives.

(a) State **two** considerations in the identification of project aims and objectives.

[2 marks]

_____

_____

_____

_____

(b) Explain how Mia can use **one** of these considerations to understand the aims and objectives of the project.

[2 marks]

_____

_____

_____

_____

25 Chloe would like to use emerging technologies to automate her home, improve her fitness and manage her daily routine.

(a) Identify **two** examples of emerging technologies that Chloe could use.

[2 marks]

_____

_____

_____

_____

(b) Explain how Chloe could use **one** of the identified emerging technologies to meet her needs.

[2 marks]

_____

_____

_____

_____

26 A careers adviser within a school is planning a lecture for students to discuss the importance of personal and professional development in the digital sector.

Discuss how achieving accreditation to specific professional disciplines could have an impact on a student's career.

[3 marks]

_____

_____

_____

_____

_____

_____

23P00163928

Please turn over

27 A local college is designing a new distance learning solution to allow students to learn from home. The project has a tight deadline and several requirements, and the project manager is worried that the team may lose focus on delivering a minimum working solution.

Assess how MoSCoW could be used to prioritise the requirements for this project.

[3 marks]

_____

_____

_____

_____

_____

_____

This is the end of the external assessment.

24P00163928

This page is intentionally left blank.

26P00163928

This page is intentionally left blank.

Document information

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