

CAMBRIDGE TECHNICALS LEVEL 3 (2016)

Examiners' report

IT

05838–05842, 05877

Unit 1 Summer 2024 series

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Introduction

Our examiners' reports are produced to offer constructive feedback on candidates' performance in the examinations. They provide useful guidance for future candidates.

The reports will include a general commentary on candidates' performance, identify technical aspects examined in the questions and highlight good performance and where performance could be improved. A selection of candidate answers is also provided. The reports will also explain aspects which caused difficulty and why the difficulties arose, whether through a lack of knowledge, poor examination technique, or any other identifiable and explainable reason.

Where overall performance on a question/question part was considered good, with no particular areas to highlight, these questions have not been included in the report.

A full copy of the question paper and the mark scheme can be downloaded from OCR.

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Unit 1 series overview

Overall candidates attempted most of the questions on the question paper. Section A was in the main answered well. Section B saw candidates picking up marks for knowing the content of the specification across a range of questions. However, marks were dropped by candidates where they did not expand their answer fully. This was either due to a lack of technical understanding in questions such as Questions 18, 20 (a), and 20 (b) or by not applying their answer to the context.

Candidates who did well on this paper generally:	Candidates who did less well on this paper generally:
<ul style="list-style-type: none">• Gained 10 or more marks in Section A.• Picked up the knowledge marks in questions across the whole of Section B.• Demonstrated a sound level of knowledge.• Explained their answers clearly demonstrating the understanding.	<ul style="list-style-type: none">• Did not have a basic level of knowledge of the unit content, leading to poor performance in Section A.• Did not relate their answers to the context in line with the demands of a vocational qualification.• Were not specific in their writing, leading to unclear responses.• Showed a lack of technical understanding of several aspects of the unit content.

Section A overview

This section contains 15 multiple choice questions that do not rely on any context. These are designed to test knowledge recall. Candidates who picked up 10 or more marks in this section tended to go on pick up marks across the rest of the question paper to gain a creditable final mark.

Question 1

1 A Personal Computer that contains a hard disk drive uses _____ storage.

A Flash

☐

B Internal

☐

C Portable

☐

D Removable

☐

[1]

Generally, answered well. Candidates who chose an incorrect answer did not focus on the key words 'contain' and 'hard disk' in the question.

Question 2

2 10101110 is an example of which number system?

A Binary

☐

B Decimal

☐

C Denary

☐

D Hexadecimal

☐

[1]

Generally answered well.

Question 3

3 Which productivity software is the **most** appropriate to organise a user's contacts?

A Email

☐

B Multimedia

☐

C Translator

☐

D Word Processor

☐

[1]

This question saw a mixed set of responses. Candidates who did not answer this correctly did not focus on the key term of 'most appropriate'.

Question 4

4 Which business software allows users to work together using combinations of text, images and video?

A CAD

☐

B Expert Systems

☐

C Multimedia

☐

D Project Management

☐

[1]

Generally answered well.

Question 5

5 Which of the following enables audio calls over the internet?

A Cellular

☐

B Instant Messaging

☐

C SMS

☐

D VOIP

☐

[1]

Generally answered well. However, candidates who did not answer correctly tended to focus on the method that is used for calling using a mobile phone, cellular, rather than the internet aspect of the question.

Question 6

6 Which problem is usually caused by having too many applications running at the same time?

A Software freeze

☐

B Unexpected hardware behaviour

☐

C Unexpected power off

☐

D Unexpected rebooting

☐

[1]

Generally answered well.

Question 7

7 Which of the following is a TCP/IP protocol for sending and receiving emails?

A FTP

☐

B HTTP

☐

C ICMP

☐

D SMTP

☐

[1]

Generally answered well.

Question 8

8 Which of the following allows more than one server to run on one piece of hardware?

A Client Virtualisation

☐

B Cloud Virtualisation

☐

C Server Virtualisation

☐

D Storage Virtualisation

☐

[1]

Generally answered well.

Question 9

9 192.168.1.1 is the default IP Address for the main server on a network. It is also the:

A Default Gateway

☐

B MAC Address

☐

C PSTN

☐

D Subnet Mask

☐

[1]

Generally answered well.

Question 10

10 Which method of communication allows short messages, images or videos to be shared with many people?

A IDE

☐

B Letters

☐

C Reports

☐

D Social networking

☐

[1]

Generally answered well.

Question 11

11 The ability to plan and implement tasks is an example of which personal attribute?

A Determination

☐

B Leadership

☐

C Respect

☐

D Time management

☐

[1]

This question led to a mix of responses showing candidates were not fully aware of the personal attributes in the specification and what they entail.

Question 12

12 Keeping data safe from unauthorised access is an example of which operational issue?

A Disaster planning and recovery

☐

B Health and safety

☐

C Organisational policies

☐

D Security of information

☐

[1]

Generally answered well.

Question 13

13 Phishing is an example of:

- A** blocking access to data
- B** deleting data
- C** listening to data transfers
- D** obtaining confidential data

☐☐☐☐

[1]

Generally answered well.

Question 14

14 Which physical security technique protects data by making it permanently unreadable?

- A** Biometrics
- B** Locks
- C** Privacy screens
- D** Shredding

☐☐☐☐

[1]

Generally answered well. Candidates who did not answer this question correctly missed the aspect of 'permanently unreadable' in the question.

Question 15

15 Which method of disposal replaces existing data with new data?

A Electromagnetic wipe

☐

B Encryption

☐

C Overwrite data

☐

D Physical destruction

☐

[1]

Generally answered well.

Section B overview

This section was based on a scenario focusing on a national chain of juices bars. Hence, to gain full marks in questions, candidates had to apply their knowledge to the context. This reflects the vocational aspect of the qualification. As a result, where candidates tended to pick up the 'knowledge' mark(s) in a question, the vocational application was not awarded as often. This restricted the overall marks awarded for some candidates. This ability to apply the knowledge to the context is where centres are advised to direct their attention for future sessions.

Question 16 (a)

Blue Milk Cantina is a large chain of juice bars across the UK. They have recently updated the IT systems at the Head Office and the distribution warehouse. Head Office deals with staffing and wages, while the warehouse holds the stock for the juice bars. The warehouse uses robots to move the stock around.

The managers in the juice bars use tablet computers to place orders, keep track of staffing hours and to communicate with Head Office.

16 The juice bar managers place an order each week using the tablet computers.

(a) Identify **two** input devices that could be used to place the order.

1

2

[2]

Most candidates correctly identified two input devices with the most common answers being mouse, keyboard and touch screen.

Question 16 (b)

- (b) Identify and describe **one** benefit and **one** limitation of using a tablet computer to place the orders.

Benefit

.....

.....

.....

Limitation

.....

.....

.....

[4]

Most candidates were able to identify a benefit and/or limitation of using a tablet computer. However, in line with comments made earlier in this section of the report, candidates missed out on the expansion mark by not relating it to the context. For example, candidates would prefer to use a tablet to take orders from the tables i.e. the customers. This was not appropriate for this context-based question as it was asking about the weekly orders being placed by the manager.

Exemplar 1

Benefit

its highly portable, as it is compact
and light which is ~~quite~~ convenient for
these managers.

Limitation

Requires battery to be charged ~~quite~~ for
use, if it isn't charged then the
company will not be able to place
orders.

The candidate identifies both a benefit and a limitation of using tablet computers. The limitation gains the second mark as it clearly explains how the limitation impacts the use in the context. The benefit however, is too vague, how is it convenient for the managers? The candidate needed to expand on this by possibly talking about being able to work in a different part of the building/ bar.

Question 16 (c)

- (c) Each tablet connects to the internet and the company WAN using Wifi in the juice bars.

Identify and describe **two** types of communications hardware, other than ethernet cables, required to connect to the WAN.

1

.....

.....

2

.....

.....

[4]

There were a wide range of responses seen to this question showing a wide range of knowledge and understanding across the cohort this session. In the main, candidates were able to identify at least one type of communication hardware as stated in the specification. However, the descriptions of their use tended to be generic and showed a lack of technical understanding relevant to a Level 3 qualification. As a result, the expansion marks were not awarded as often as expected. Candidates need to be clearer and more precise in their answers.

Question 16 (d)

- (d) Head Office are buying new tablet devices to capture promotional images for use online.

Identify a minimum storage capacity required for this device, including the unit of measurement.

Storage capacity

Unit of measurement

[2]

This question was not well answered. Candidates did not read the question carefully and as a result, lost marks. The question asked for minimum storage capacity for this context, not the capacity that they would like based possibly on their own devices.

Question 17

17 Blue Milk Cantina use an app to manage staffing hours and wages.

What **type** of software is this an example of?

.....
.....[1]

Generally answered well with a range of appropriate responses.

Question 18

18 Blue Milk Cantina use a Multiuser Operating System for the personal computers at Head Office.

Describe **one** benefit and **one** limitation of using a Multiuser Operating System.

Benefit

.....
.....
.....

Limitation

.....
.....
.....

[4]

Most candidates gained at least one mark for the benefit of allowing multiple users to access the system. However, candidates tended to show a lack of technical understanding of how this is a benefit in the context. For a limitation, the most common answer was for an increased security risk; however, expansion for this was often not well-written. This led to marks being lost.

Question 19

- 19** Each week a video conference meeting is held between Head Office and all of the juice bar managers.

Explain **one** advantage and **one** disadvantage of using video conferencing for this meeting.

Advantage

.....

.....

.....

Disadvantage

.....

.....

.....

[6]

Due to how education has changed in these recent years, this question was generally well-answered with candidates tending to gain at least two marks. These tended to be where candidates were able to relate their own experience of using video conferencing to this question. However, as already stated in this report, marks were lost for candidates not being clear in their expansion in this context.

Assessment for learning



Candidates need to read the questions carefully and then answer in the context of the question. This question is specifically about a meeting between the Head Office and all the juice bar managers. The question asks for advantages and disadvantages **for this meeting**. To gain all the marks candidates need to the answer in this context specifically, and not with generalised advantages and disadvantages.

Question 20 (a)

20 The Head Office IT system has one server that is used for multiple functions.

(a) Identify and describe **two** advantages of separating the web and mail servers from the main file server.

1

.....

.....

2

.....

.....

[4]

A wide range of marks were awarded on this question; however, marks were lost due to a lack of technical understanding of how servers are set up and work. Many vague answers regarding improved organisation, can find documents easier, were seen demonstrating this lack of understanding. Where candidates did perform well, they were clear about the advantages such as increased security for the file server as any virus on an email would not impact the file server.

Question 20 (b)*

- (b)* The Head Office IT system consists of 8 personal computers, one server and a three-in-one scanner/printer/copier.

Identify a suitable network topology that could be used at the Head Office. Justify your choice including reference to the hardware required.

Network topology:

Justification

.....

[10]

The most popular topologies seen in responses were bus, star and mesh. As designed, this question did show a wide range of understanding across the cohort of candidates this session. Candidates who performed poorly on this question tended to become confused in their reasoning for the topology identified not clearly explaining the points that they were making. This often led them to explaining the benefits of another topology rather than the one they identified. Those candidates who did answer the question well clearly justified the topology identified, explaining fully their reasoning in context. These candidates also included the hardware required, as stated in the question.

Exemplar 2

Network topology: ~~Bus Mesh Peer to peer~~ Star

Justification Star would be suitable here because
 It requires one server and other hardware can
 be added on star is ~~so~~ useful because
 It has all computers and hardware connected
 to one server meaning if one computer
 or piece of hardware stops working the rest
 will keep working but the downside is if
 the server stops working everything will stop

The candidate has clearly identified a plausible network topology – a Star network. They have then described one point of the network regarding how if one computer stops working in the topology the others are not impacted. The candidate adds to this that if the server stops then the whole network would as well. At no point in the response does the candidate expand on this main point and convert it into an explanation, why this is beneficial i.e. it allows for the rest of the network to continue to operate whilst the one computer is repaired/replaced due to the individual connections to the server. As a result, the answer cannot be placed in Level 3, where the marking criteria for that level refers to candidates explaining the points they make. Further to this, the candidate does refer to any hardware required for the network, other than the devices included in the question.

This response can be placed at the top of Level 2 this session as there is an adequate justification based on one point being described. There is some reference to the hardware required as stated in the question, however, none other than that mentioned in the question. The reasoning shown in the response shows some structure but is lacking in detail.

Question 20 (c)

- (c) Updates to the firmware for the warehouse robots come with a Standard Operating Procedure (SOP).

Identify and describe **three** advantages of using a SOP when updating the firmware.

- 1
-
- 2
-
- 3
-

[6]

This question was not answered well with the level of understanding about a Standard Operating Procedure. Many candidates referred to the robots using an SOP rather than the use of an SOP by the staff to update the robots' firmware.

Misconception



Candidates were not clear about what a Standard Operating Procedure is and what/who it's aimed at.

Question 20 (d)

- (d) The warehouse has a range of hardware and software that is maintained by a team of ICT technicians.

Identify and describe **two** barriers to communication for the ICT technicians working in the warehouse.

1

.....

.....

2

.....

.....

[4]

The barriers to communication are clearly stated in the specification yet this question was not well-answered by a significant number of candidates. Candidates who did well on this question tended to select noise or language as a barrier. They then described these well in the context of the ICT technicians working in the warehouse.

Question 21 (a)

21 The IT technicians must keep the warehouse IT systems running with minimal downtime.

(a) Identify and describe **two** personal attributes that the IT technicians should have.

1

.....

.....

2

.....

.....

[4]

Once again, this question was based on content clearly stated in the specification. While many candidates gained at least one mark on this question, many marks were dropped. This was either for not describing the attribute in relation to the context of the question or by mixing the terminology up with other content in the Unit 1 specification. The most common confusion was use of terminology from Section 4.4. Candidates need to know where the content sits in the specification, especially in relation to the key terms used in the questions, in this case, personal attributes.

Question 21 (b)

(b) The IT technicians are members of the Chartered Institute for IT.

Describe **one** benefit to the IT Technician for being a member of a professional organisation.

.....

.....

.....

.....**[2]**

This question saw a mixture of responses, with in the main a degree of confusion about the role of a professional organisation. Candidates also missed marks by not reading the question fully and not relating the benefit to the technician. Many answers were referring to the benefit to a business or organisation.

Question 21 (c)*

- (c)*** One of the juice bar managers has been caught stealing cash from the till. The staff in the juice bar knew about it but did not report it as they were worried about their jobs. Blue Milk Cantina is to implement a company whistleblowing policy.

Discuss the issues that should be included in the whistleblowing policy.

.....

.....

.....

.....

.....

.....

..... [10]

This question, was in the main, answered well by candidates. Candidates who did well on this question focused on a small number of issues and developing their answers fully. Candidates who did not do as well, tended to list or briefly described several issues, taking a scatter approach to their response. The higher levels of the mark scheme refer to the use of well-developed reasoning, which by addressing too many issues, is very difficult to do. Candidates will benefit from focusing on fewer points but explaining them more fully in context.

Question 21 (d)

- (d)** Identify the organisational policy that would include using the network in a professional manner, as one of its principles.

.....

..... [1]

This question was not answered well. Candidates in the main were not clear about the relevant policy.

Question 22

22 Head Office need to keep the data on the main server secure.

Identify **one** physical security measure that could be used to protect the server room.

.....
.....[1]

This question was generally answered well. However, some candidates were not clear about the difference between physical and logical security measures.

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