

CAMBRIDGE TECHNICALS LEVEL 3 (2016)

Examiners' report

IT



Unit 1 January 2019 series

Version 1

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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. 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 can be downloaded from OCR.

Unit 1 series overview

The specification for Cambridge Technicals IT Level 3 is technical at its core. This means that the knowledge and vocabulary required to successfully pass the examination has a level of precision. Many candidates this session lost marks from being unduly careless and imprecise. An example is Question 19, where many stated that a database 'stores information' when they should state that a database 'stores data'.

This lack of in depth knowledge can also be seen in the multiple choice questions that required more precise knowledge to answer (for example Questions 10 and 12).

It was also clear that some candidates had been prepared using past papers and while this is good practice, it has led to some candidates offering answers from past papers when these are clearly wrong (see Question 19).

We would also like to advise to teach to the specification. Some questions clearly point to subsections such as 'Productivity Software' and 'Protocols' on the specification and the answers required are specific to that section.

Section A overview

Most candidates attempted all questions. Very few candidates achieved full marks across this section.

Question 1

1 Which of the following is an input device?

(a) Barcode reader

(b) Headphones

(c) Printer

(d) Speaker

[1]

Answered well. Very few candidates gave an incorrect response.

Question 2

2 Which of the following is safe to remove whilst a laptop is running?

(a) External hard drive

(b) Hard drive

(c) RAM

(d) ROM

[1]

Answered well although some candidates selected (b).

Question 3

3 Which of the following is an example of a port?

(a) SAS

(b) SATA

(c) SCSI

(d) SMS

[1]

Mainly answered well with some candidates choosing (c).

Question 4

4 Which of the following connection technologies requires line of sight?

(a) Bluetooth

(b) GSM

(c) Laser

(d) WiFi

[1]

Answered well.

Question 5

5 Which of the following is **not** part of the Internet of Things?

(a) Smart bulb

(b) Smart iron

(c) Smart refrigerator

(d) Smart thermostat

[1]

Answered well.

Question 6

6 Which of the following is an example of an engine management system in a car?

(a) Embedded

(b) Freeware

(c) Off the shelf

(d) Open source

[1]

Candidates chose a range of different answers.

Question 7

7 Which of the following is part of an Integrated Design Environment (IDE) that converts instructions into machine code?

(a) Compiler

(b) Debugger

(c) Interpreter

(d) Text editor

[1]

Answered well.

Question 8

8 Which of the following **best** describes a personal computer (PC) used at home?

(a) Multiuser multitasking

(b) Multiuser single application

(c) Single user multitasking

(d) Single user single application

[1]

Answered well.

Question 9

9 Which communication method would be **most** appropriate for discussing a new plane design?

(a) Email

(b) Instant messaging

(c) Teleconference

(d) Video conference

[1]

Answered well.

Question 10

10 Which of the following is **not** a feature of an Internet Protocol (IP)?

(a) Forwarding packets to individual computers.

(b) Putting packets back together in order.

(c) Sending packets to the Domain.

(d) Sending packets to the Gateway.

[1]

Accessed by very few candidates.

Question 11

11 Complete the following sentence:

_____ virtualisation typically uses a mixture of private and public cloud services.

(a) Client

(b) Hybrid

(c) Server

(d) Storage

[1]

Accessed by very few candidates.

Question 12

12 Which of the following is an element of a Class C network that will default to 255.255.255.0?

(a) Default gateway

(b) Host IP address

(c) Local IP address

(d) Subnet mask

[1]

Accessed by very few candidates.

Question 13

13 Complete the following sentence:

A token ring network is an example of a _____ .

- (a) LAN
- (b) MAN
- (c) PSTN
- (d) WAN

[1]

Answered well.

Question 14

14 Which of the following is **not** a characteristic of an ADSL connection?

- (a) Faster upload than download rate
- (b) Fibre optic connection
- (c) Microfilter installed on the line
- (d) Simultaneous voice and data connection

[1]

Many candidates chose (b).

Question 15

15 Which of the following is **not** a common characteristic of helpdesk software?

(a) Sales ordering process

(b) Service level agreement

(c) Technician assignment

(d) Ticketing

[1]

Not answered well, possible negative in the question ignored by some candidates.

Section B overview

Candidates have quite consistently answered certain sections of this section better than others. The questions on being ready for work were attempted by most candidates, but more searching questions on technical devices, protocols and networks were not accessed as fully. Depth of knowledge has really shown through in this section as candidates have frequently been able to identify, but were unable to describe or explain deeply and in technical terms.

Centres are advised to use the specification to not only locate the technical terms required for this unit, but also their categorisation. 'Productivity Software' is a categorisation term that has eluded many candidates in this session.

Question 16(a)

Monty Bella Retail operates five retail parks throughout the UK. After years of underinvestment, the information technology (IT) of the company is aging and is no longer fit for purpose. Monty Bella Retail has decided to move its IT infrastructure from its own data centre to the Cloud using public cloud providers. Monty Bella Retail also wants to upgrade all IT in its retail parks.

Monty Bella Retail would like to use technology to improve the customer experience whilst shopping. Each retail park will feature similar equipment to allow data about customers, their purchases and shopping habits to be shared amongst the business. Shoppers will also be tracked as they move through the retail parks. This information will be used for marketing purposes, to create promotions and to ensure the items that shoppers are looking for can be easily located.

16 Monty Bella Retail would like to track shoppers as they move through the retail parks using wireless technologies.

(a) Identify and describe **two** wireless technologies that could be used to track shoppers as they move through the retail parks.

1

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2

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[4]

Candidates were asked to identify and describe two wireless technologies that could be used to track shoppers. Whilst many candidates could identify one or two wireless technologies few could give a description of how they would enable the shoppers to be tracked and so received 2 out of a possible 4 marks.

Question 17

Monty Bella Retail has decided to use virtualisation technologies to replace hardware in its data centre.

17* Discuss, using examples, the benefits and limitations to Monty Bella Retail of using virtualisation technologies.

[10]

.....

.....

.....

This question was marked using a banded response mark scheme. Candidates were asked to discuss the benefits and limitations to MBR of using virtualisation technologies.

Good responses included detailed discussions on either side of the argument. Others produced discussions relating more to limitations or benefits.

Some candidates were able to describe a range of reasons. Very few candidates identified only generic points to do with virtualisation technologies.

The candidates generally answered this question well mainly giving advantages for the reduced costs for hardware and disadvantages for training staff and expertise.

Question 18(a)

18 Shops in each retail park are all connected to a wired Local Area Network (LAN).

(a) Identify **one** piece of communications hardware needed to create a wired LAN.

.....[1]

Candidates were asked to identify one piece of communications hardware needed to create a wired LAN. Correct responses identified a hub or switch. Others identified a router or occasionally a NIC. These would be needed to create a WAN.

Some candidates offered 'ethernet cable'.

Question 18(b)

(b) Describe **two** ways Monty Bella Retail could use a wired LAN in its retail parks.

1.....

 2.....

[4]

Candidates were asked to describe two ways MBR could use a wired LAN. Good responses about sharing data and peripherals, centralised data stores and the ability to log on from any computer in the retail parks were relatively rare.

Some candidates provided answers from previous sessions and relating to the speed and security of LAN networks. Others described network topologies.

Question 18(c)

(c) Describe **one** protocol that could be used on the wired LAN.

.....

 [2]

Candidates were asked to describe one protocol that could be used on the wired LAN. Many good responses were able to provide the acronym and describe what it was used for. Others were able to achieve 1 mark for providing the acronym.

Question 21*

21* Discuss the operational issues Monty Bella Retail should consider when moving its IT infrastructure to public cloud providers.

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[10]

Candidates were asked to discuss the operation issues MBR should consider when moving its IT infrastructure to public cloud providers. Candidates needed to refer to the scenario for Part B to answer this question fully. Good responses explained the topics to do with operation issues (5.2 on the unit specification) in the context of the planned move from an in-house physical to a public cloud virtual data centre.

Others identified or described operational issues to do with data security and disaster planning and recovery. A few included items about change management.

Quite a number of candidates repeated answers they had used for Question 17 which were often not relevant here.

Others included answers related to costs which were not relevant in the answer.

Question 22(a)

22 Monty Bella Retail uses a Management Information System (MIS) and a Customer Relationship Management (CRM) system.

(a) Explain the purpose of MIS and CRM systems.

MIS
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CRM
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[6]

Candidates were asked to explain the purpose of two types of business systems, MIS and CRM. A few good responses showed some candidates had the technical knowledge required to answer in detail. Other candidates had difficulty differentiating these particular business systems from Helpdesk or SOP systems. A number of candidates were unable to achieve any marks for this question.

Question 22(b)

(b) Monty Bella Retail uses a web server to host its web site.
Identify **one other** type of server Monty Bella Retail could use.

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

Candidates were asked to identify one other type of server MBR could use as well as the web server. Good responses provided a single server type from a wide range that could have been given. Others seemed to have sought inspiration from the multiple choice questions and the options for Question 11 in particular which were inappropriate. Here at least answers from previous Question Papers were relevant with file and mail server gaining candidates the mark.

Many candidates were able to achieve a mark on this question. When an incorrect answer was offered it was usually 'client server' or left in blank.

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