

CAMBRIDGE TECHNICALS LEVEL 3 (2016)

Examiners' report

IT

05838–05842, 05877

Unit 1 Summer 2023 series

Contents

Introduction 3

Unit 1 series overview 4

Section A overview 5

Section B overview 6

 Question 16 (a) 6

 Question 16 (b) 7

 Question 17 (a) 7

 Question 17 (b) 8

 Question 17 (c) 9

 Question 18..... 10

 Question 19..... 11

 Question 20 (a)* 11

 Question 20 (b) 12

 Question 21 (a) 13

 Question 21 (b) 13

 Question 22 (a)* 14

 Question 22 (b) 14

 Question 22 (c) 15

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 and the mark scheme can be downloaded from OCR.

Would you prefer a Word version?

Did you know that you can save this PDF as a Word file using Acrobat Professional?

Simply click on **File > Export to** and select **Microsoft Word**

(If you have opened this PDF in your browser you will need to save it first. Simply right click anywhere on the page and select **Save as . . .** to save the PDF. Then open the PDF in Acrobat Professional.)

If you do not have access to Acrobat Professional there are a number of **free** applications available that will also convert PDF to Word (search for PDF to Word converter).

Unit 1 series overview

Overall candidates were well prepared and attempted the majority of questions.

Candidates performed very consistently in Section A. This has certainly been another series where there has been an increase in the number of candidates identifying the correct area from the specification document.

Many candidates continue to lose marks on the technical questions where an in depth knowledge is required.

Candidates who did well on this paper generally:	Candidates who did less well on this paper generally:
<ul style="list-style-type: none">• achieved 10+ marks in Section A• made sure to identify first in an 'Identify and Describe' style question• added context and expanded points in Questions 18 and 20.	<ul style="list-style-type: none">• did not identify first in an 'Identify and Describe' question• used generic terms rather than precise technical terminology.

Section A overview

A minority of candidates achieved full marks for Section A but most candidates achieved half of the marks. Questions 3, 6, 7, 9, 10, 11, 12, 13, 14 and 15 were most commonly answered correctly. The main areas of difficulty in this paper were Questions 1, 2, 4 and 8.

Section B overview

Section B was attempted well by the majority of candidates with the notable exceptions of Question 17(b) and (c), Question 18 and Question 20(a). Question 17 parts (b) and (c) were often left blank. Question 20(a) was often attempted, but the term 'leased line' was misunderstood, and candidates supplied answers concerning renting over buying and were not given marks. Question 21(a) was consistently answered well with many candidates gaining 5 or 6 marks. This session has seen more candidates able to distinguish between personal attributes and ready for work for Question 19. There has been some improvement in exam technique, but there are still instances of candidates not gaining marks where a question asks them to identify first.

Question 16 (a)

Lars Model Railways sell model railway sets and accessories. Currently the business has two shops, one in Manchester and the other in Leeds.

Each shop stocks different model railway sets. A shared stock database enables each shop to see what model railway sets are in stock at the other.

Each shop has a computer next to the till. This computer has access to the internet. The computer and the till are not linked so sales are manually updated on the shared stock database.

16 (a) The computers are used to check the stock database.

Describe the **purpose** of each of the components below.

Hard drive

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

Motherboard

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

[4]

This question was answered well with most candidates scoring some marks. Those that achieved higher marks focused their response on the purpose of each device rather than describing it.

Question 16 (b)

(b) Identify and describe **one** connectivity method that can be used to **connect** the computers in each shop to each other and the internet.

Method

.....

Description

.....

.....

.....

[3]

This question was well answered. Candidates had to apply the context of the question to their response to gain marks. Suitable connectivity methods were accepted from sections 1.4 and 3.4 of the specification.

Question 17 (a)

17 (a) While staff were working on the computer, the software they were using **froze**.

Explain **two** reasons why the software may have **frozen**.

1

.....

.....

.....

2

.....

.....

.....

[4]

This question saw very good responses giving both a reason and some technical explanation of why the software had frozen. Candidates did sometimes state a reason without explaining further.

OCR support



Encouraging candidates to answer 'explain questions' with 'because' will encourage them to think of explanations. Where there are 2 marks add an 'and'.

The software may have frozen because too many applications are open and this has filled the RAM or the software may have frozen because the internet is down and the user has a thin client.

Question 17 (b)

(b) The computer screen displayed an error code using the **hexadecimal** number system.

Explain how the **hexadecimal** number system works.

.....

.....

.....

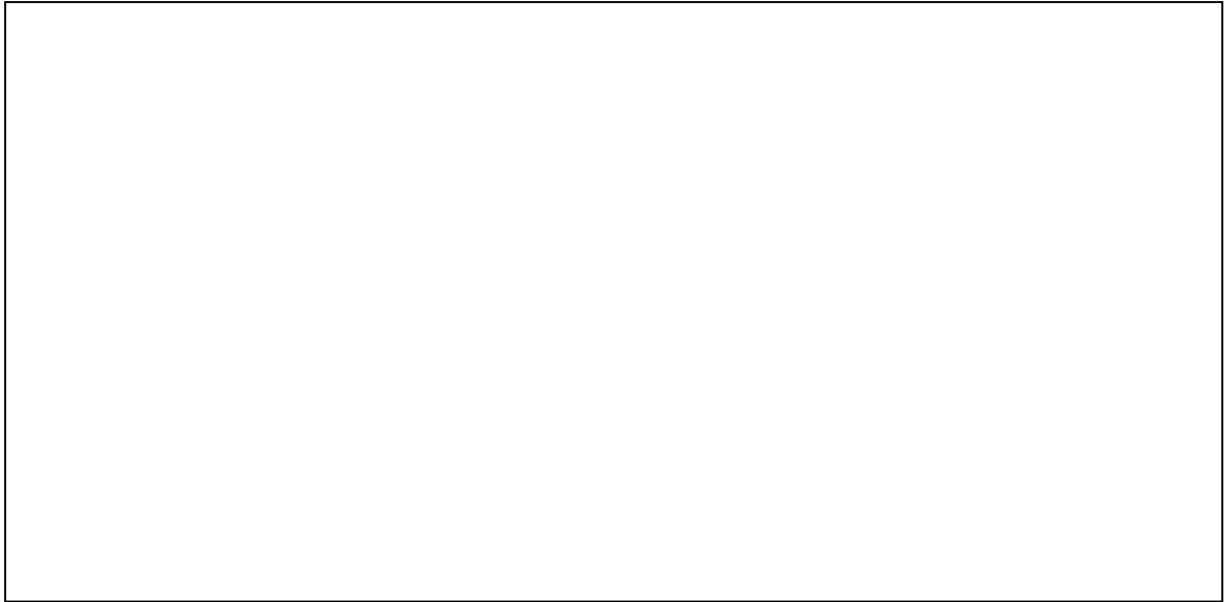
..... [2]

The majority of candidates offered responses that got a mark for this question. Some candidates gave some excellent explanations of how hexadecimal works.

Question 17 (c)

(c) Using the **binary** system, calculate the number of bits in **1 mebi**.

Show your workings.



[2]

Some candidates found this question quite challenging. Some candidates attempted to show working out using binary tables. The question required two technical pieces of knowledge – what is a bit? and how many in a mebi? Candidates needed to know both to be successful.

Question 18

18 Lars Model Railways use a database to store records of stock in the shops.

Identify and describe **two benefits** of using a database to keep records of the stock.

1

.....

.....

.....

2

.....

.....

.....

[4]

Many responses saw repeats of the question or generic benefits of keeping records (achievable also with a spreadsheet). More successful responses were able to highlight features particular to databases that would make it a beneficial tool to keep records of the stock.

OCR support



A good example of an answer for this question would be 'Queries'.
Queries allow the searching of databases for particular information based on search terms/parameters

Question 19

19 Lars Model Railways have employed an IT consultant to help them grow their business.

Describe **two** ways the IT consultant can demonstrate that they are **ready for work** at the first meeting.

1

.....

.....

.....

.....

2

.....

.....

.....

[4]

There were some good instances of candidates pinpointing areas from the 'Ready for Work' section of the specification to answer this question. Some candidates continued to mix in answers from Personal Attributes which was incorrect.

Question 20 (a)*

20 (a)* The IT consultant has suggested that Lars Model Railways increase their online presence by launching an online store.

A **leased line** could be used to connect the shops to the Internet.

Discuss the **benefits** and **drawbacks** to Lars Model Railways of using a **leased line** connection.

.....

.....

.....

.....

.....

.....

.....

.....

.....

.....

[10]

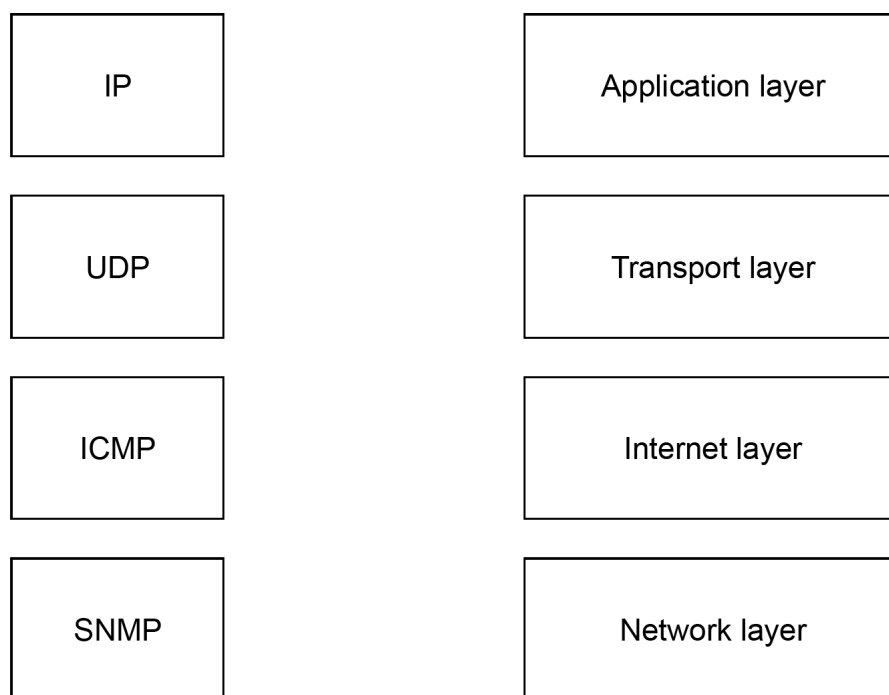
Where most candidates attempted this question, it was clear that the technical term 'leased line' was misunderstood to mean a rented line and gave responses relating to renting rather than owning. Some candidates did provide responses that mentioned high speeds, security, and expense but it was rare to see something fully explained.

Question 20 (b)

(b) When the shop computers communicate with each other different protocols are used.

Draw a line from each protocol to the correct layer of the TCP/IP protocol stack.

Each protocol is only used **once**.



[4]

Most candidates were able to gain some marks on this question, but it was not common to see all 4 marks given.

Question 21 (a)

21 (a) Lars Model Railways have been advised to change their physical storage system to a virtual storage system.

Select the **advantages** and **disadvantages** of using virtual storage from the list below.

Write the number under the appropriate heading.

- 1 Reduces the amount of physical storage required
- 2 Increases the links to data access
- 3 Time taken for taking backups of the system reduced
- 4 Allows costs to be better predicted for the business
- 5 Correcting problems can be difficult
- 6 Easier to secure and encrypt.

Advantages of virtual storage	Disadvantages of virtual storage

[6]

This question tended to be very well answered, often seeing 5 marks. When 5 marks were achieved it was usually number 6 under the wrong heading.

Question 21 (b)

(b) Lars Model Railways have been advised to install an application server.

Identify and describe **one advantage** of using an application server.

.....

.....

.....

.....

.....

.....

.....

.....

[3]

This was a very technical question which many candidates found difficult. Some candidates managed to describe what an application server was, but it was uncommon to have a candidate identify an advantage.

Question 22 (a)*

22 (a)* The IT consultant has explained to Lars Model Railways that the business will face increased **threats** from having an online store presence on the internet.

Discuss the **threats** that having an online store could cause and the digital security methods that could be used to **mitigate** them.

.....
.....
.....
.....
.....
..... [10]

This question was well answered with a number of candidates both identifying threats, explaining them, and then continuing to identify and explain digital security methods to mitigate them. Where candidates gained fewer marks, they left out explaining the threats, the mitigations or both.

Question 22 (b)

(b) Customers will need to register to use the online store. The customer details will be held by Lars Model Railways.

Explain **one** action that needs to be taken by Lars Model Railways to **conform** to the legislation that applies to the holding of customer data.

.....
.....
.....
.....
..... [3]

This question was technically very specific - one action that LMR could take to conform to legislation applying to holding data. Very few candidates provided a response gaining more than 1 mark.

Question 22 (c)

- (c) The introduction of the online store will allow Lars Model Railways to use different communication methods to connect with their customers.

Explain how **blogs** and **email** could be used to connect with their customers.

Blogs

.....

.....

.....

.....

.....

Email

.....

.....

.....

.....

.....

[6]

This question was also often attempted and most candidates did get marks for this section.

One thing to note about this question is the **direction of connection** – LMR to the customers. Many responses discussed the ways in which the customer could contact LMR.

Supporting you

Teach Cambridge

Make sure you visit our secure website [Teach Cambridge](#) to find the full range of resources and support for the subjects you teach. This includes secure materials such as set assignments and exemplars, online and on-demand training.

Don't have access? If your school or college teaches any OCR qualifications, please contact your exams officer. You can [forward them this link](#) to help get you started.

Reviews of marking

If any of your students' results are not as expected, you may wish to consider one of our post-results services. For full information about the options available visit the [OCR website](#).

Access to Scripts

For the June 2023 series, Exams Officers will be able to download copies of your candidates' completed papers or 'scripts' for all of our General Qualifications including Entry Level, GCSE and AS/A Level. Your centre can use these scripts to decide whether to request a review of marking and to support teaching and learning.

Our free, on-demand service, Access to Scripts is available via our single sign-on service, My Cambridge. Step-by-step instructions are on our [website](#).

Keep up-to-date

We send a monthly bulletin to tell you about important updates. You can also sign up for your subject specific updates. If you haven't already, [sign up here](#).

OCR Professional Development

Attend one of our popular CPD courses to hear directly from a senior assessor or drop in to a Q&A session. Most of our courses are delivered live via an online platform, so you can attend from any location.

Please find details for all our courses for your subject on **Teach Cambridge**. You'll also find links to our online courses on NEA marking and support.

Signed up for ExamBuilder?

ExamBuilder is the question builder platform for a range of our GCSE, A Level, Cambridge Nationals and Cambridge Technicals qualifications. [Find out more](#).

ExamBuilder is **free for all OCR centres** with an Interchange account and gives you unlimited users per centre. We need an [Interchange](#) username to validate the identity of your centre's first user account for ExamBuilder.

If you do not have an Interchange account please contact your centre administrator (usually the Exams Officer) to request a username, or nominate an existing Interchange user in your department.

Active Results

Review students' exam performance with our free online results analysis tool. It is available for all GCSEs, AS and A Levels and Cambridge Nationals.

[Find out more](#).

Need to get in touch?

If you ever have any questions about OCR qualifications or services (including administration, logistics and teaching) please feel free to get in touch with our customer support centre.

Call us on
01223 553998

Alternatively, you can email us on
support@ocr.org.uk

For more information visit

 **ocr.org.uk/qualifications/resource-finder**

 **ocr.org.uk**

 **facebook.com/ocrexams**

 **twitter.com/ocrexams**

 **instagram.com/ocrexaminations**

 **linkedin.com/company/ocr**

 **youtube.com/ocrexams**

We really value your feedback

Click to send us an autogenerated email about this resource. Add comments if you want to. Let us know how we can improve this resource or what else you need. Your email address will not be used or shared for any marketing purposes.



I like this



I dislike this

Please note – web links are correct at date of publication but other websites may change over time. If you have any problems with a link you may want to navigate to that organisation's website for a direct search.



OCR is part of Cambridge University Press & Assessment, a department of the University of Cambridge.

For staff training purposes and as part of our quality assurance programme your call may be recorded or monitored. © OCR 2023 Oxford Cambridge and RSA Examinations is a Company Limited by Guarantee. Registered in England. Registered office The Triangle Building, Shaftesbury Road, Cambridge, CB2 8EA. Registered company number 3484466. OCR is an exempt charity.

OCR operates academic and vocational qualifications regulated by Ofqual, Qualifications Wales and CCEA as listed in their qualifications registers including A Levels, GCSEs, Cambridge Technicals and Cambridge Nationals.

OCR provides resources to help you deliver our qualifications. These resources do not represent any particular teaching method we expect you to use. We update our resources regularly and aim to make sure content is accurate but please check the OCR website so that you have the most up to date version. OCR cannot be held responsible for any errors or omissions in these resources.

Though we make every effort to check our resources, there may be contradictions between published support and the specification, so it is important that you always use information in the latest specification. We indicate any specification changes within the document itself, change the version number and provide a summary of the changes. If you do notice a discrepancy between the specification and a resource, please [contact us](#).

You can copy and distribute this resource freely if you keep the OCR logo and this small print intact and you acknowledge OCR as the originator of the resource.

OCR acknowledges the use of the following content: N/A

Whether you already offer OCR qualifications, are new to OCR or are thinking about switching, you can request more information using our [Expression of Interest form](#).

Please [get in touch](#) if you want to discuss the accessibility of resources we offer to support you in delivering our qualifications.