

CAMBRIDGE TECHNICALS LEVEL 3 (2016)

Examiners' report

IT



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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 subject [web](#) page.

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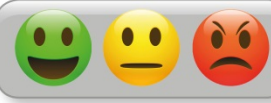
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Paper Unit 2 series overview

The overall performance of the candidate continues to improve. However many candidates still demonstrated knowledge gaps in relation to the unit content. Centres should make sure that candidates are familiar with all areas of the unit content before being entered for the external examination.

The correlation between content, context and command word still appeared to be limited. Candidates should be aware of the differing command words, e.g. identify, describe, explain, discuss, and the demands of each of these. Candidates should also be familiar with the concept that questions may have a specific focus. It is this focus which should be considered by candidates when composing their responses to questions.

In this unit, a pre-release case study is issued, this provides the context for Section A of the external examination. A limited number of candidates appeared to be unfamiliar with the context of the case study, for this external examination this was Response Team. This apparent lack of familiarity limited candidates' accessibility to many of the questions in Section A of the external examination where the questions are directly linked to this case study

The case study also includes some research prompts for candidates. These prompts should not be ignored as the knowledge gained through completing the research will enhance accessibility to the questions in Section A.

Section B of the external examination does not require candidates to link their responses to the case study. It was, however, noted that there was evidence of knowledge gaps from the candidates' responses in this section.

There are many resources available which can be used during the teaching of this unit. Centres are encouraged to access the resources available from the OCR website that relate to the interpretation of the case study and exemplification/analysis of candidate responses from previous sessions.

Section A overview

This section of the external examination was directly linked to the case study, Response Team.

Question 1 was directly linked to bullet points 1 and 2 of the research points.

Question 2 was directly linked to bullet point 1 of the research points.

Question 3 was directly linked to bullet point 1 of the research points.

Question 4 was directly linked to bullet point 4 of the research points.

Question 5 was directly linked to bullet point 3 of the research points.

Question 6 was directly linked to bullet point 1 of the research points.

Question 1 (a) (i)

1 Details of the cars are stored in the Car Database.

(a) (i) Identify the information style that has been applied to the *Date of Registration* field.

.....[1]

Part a (i) of the question required candidates to identify the information style that had been applied to the *Date of Registration* field in the database. Many candidates provided responses that referred to the date or numeric information style.

Question 1 (b)

- (b) Identify the information classification that the Car Database would be included in. Justify your choice.

Information classification[1]

Justification

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.....

.....

.....[3]

Many candidates were able to provide an acceptable response for the information classification. Acceptable responses included business or confidential. To be considered for the marks allocated for the justification, the mark for the correct type of software had to have been given.

To achieve all allocated marks for the justification, 3 marks, the response needed to be in the context of the scenario. Many candidates did not contextualise their response so limiting the marks available to 2. Candidates should be reminded that all responses in Section A need to be applied to the context of the case study. Acceptable responses included the fact that confidential details are stored in the Car Database such as VIN numbers and product recalls.

It was noted that many candidates felt that as customer details are stored these needed to be kept confidential. This is incorrect as no customer details are shown in the excerpt. Centres should be cautious about adding data and information to that given in the case study.

Question 2 (a)

- 2 Each car has a tracking system which enables its location to be found.

- (a) Identify the data analysis tool the tracking system would be included in.

.....[1]

Many candidates were able to provide a correct response to this part of Question 2. Acceptable responses included GPS or location tracking.

Question 2 (b)

(b) Justify the use of the car's tracking system by the response team.

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[4]

Candidates needed to justify the use of the cars tracking system. Details were given in the case study about how the tracking system was used. These details included how the location can be remotely found to a variance of 5m.

Those candidates who had a good level of understanding of the case study were then able to expand their response to include such points as the location will enable help to be sent quickly if the car had been in an accident and help was needed, or the nearest garage could be located to get to the car for recovery.

A minority of candidates had picked up on the point that if the car had been in an accident and the air bags deployed then the SOS button, which enables tracking to begin, would be activated automatically. These candidates were then able to expand their response to provide details which included the fact that emergency services could be sent by the Response Team working remotely, which could save the lives of the driver and any passengers.

Question 3 (a)

3 The results of a car’s diagnostic test are uploaded to a shared storage area.

(a) Explain the purpose of this shared storage area.

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[3]

This question focused on the use of the shared storage area which is used by the Response Team to upload the results of the remotely completed diagnostic check. Details are given in the case study relating to the use of the shared storage area.

Many candidates were able to provide an explanation that related to the fact that the results of the check are uploaded in the UK, where the Response Team is based, and it is, therefore irrelevant where the car is located. Therefore, the accessing of the results via the shared storage area is not location limiting.

Question 3 (b)

- (b) Describe **one** advantage and **one** disadvantage of uploading the diagnostic test results to a shared storage area.

Advantage

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Disadvantage.....

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.....

[4]

Most candidates were able to access all marks allocated to this question by providing an acceptable advantage and disadvantage. Candidates should be encouraged to consider any number requirements defined in a question. For example, in this question only one advantage and one disadvantage were required.

The most common advantage given by candidates is that the tests could be accessed from anywhere in the world as long as an internet connection was available. Other acceptable responses provided included the fact that these tests can be kept secure as they can only be accessed by using the automatically generated access code.

The most common disadvantage given by candidates was related to hacking/hackers. Those candidates who provided responses relating to hackers/hacking were more likely to only be given one of the two allocated marks. This was because they were unable to provide further relevant description related to their response. Acceptable expansion responses could include that the results of the tests could contain sensitive data, or the tests could be deleted by the hacker.

Question 3 (c)

- (c) Describe **one** consequence to the car owner of poor-quality information being passed to the repair and recovery garage.

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.....[2]

The focus of this question was on the consequences to the car owner. It appeared that many candidates did not read the question correctly as responses were provided that related to the consequences to the repair and recovery garage. These responses focused on the fact that the garage would not fully understand the problems with the car and so may not be able to repair it.

Acceptable responses focused on the consequences to the owner, such as the correct parts may not be available so leading to delays in getting the car back on the road to continue the journey. Another acceptable response was that the repairs may take longer so meaning that the customer may have to stay in a hotel so incurring extra cost.

Question 4

- 4* Discuss how the principles of information security, including the risks and impacts, should be considered by the response team when dealing with any SOS call.

[10]

This question was marked using a banded response method. Candidates were given marks based on the level of detail included in their response, and the application of their response to the case study and the risks and impacts.

The question also incorporated the quality of the response in terms of correct use of technical terms and the coherent use of reasoning. This is denoted by the use of a * next to the question number with candidates being informed of this in the rubric on the front of the examination paper.

To be given a mark in the lower range of the middle mark band, candidates had to describe the principles of information security including at least one risk and/or impact. These needed to be applied to the Response Team and their handling of the SOS call.

Acceptable principles included the fact that data integrity should be maintained and only accessed by members of the Response Team while acceptable risks could include accidental data loss. The impacts that could have been considered include if data is unable to be accessed then the Response Team cannot provide help and assistance to the driver of the car.

The greatest barrier to candidates being given the higher mark in the middle mark band was the lack of application to the case study and the level of detail provided.

The level of detail provided, the evidence of explanations, including risks and impacts, with appropriate application, and examples, to the Response Team and the handling of the SOS calls could enable candidates to be considered for a mark in the highest mark band. Candidates who achieved a mark in the highest mark band provided detailed explanation of the principles of information security, including consideration of the risks and impacts. Also, incorporated in their responses were valid applications and examples.

Question 5 (a)

5 Some of the cars have been sold and registered in the United States of America (USA). Data about the cars is sent to the USA when the cars are transported.

(a) Identify the global information protection scheme which would be applied to data sent from the UK to the USA.

.....[1]

The excerpt shown in the case study included cars that were sold in different parts of the world including France, China and the USA. Research bullet point three required candidates to research the global information protection legislation that should be considered. When carrying out the research for this bullet point candidates should have made the link between the countries the cars were sold in and the legislation that applies in these countries. The Safe Harbour Scheme, which has been superseded by the Privacy Shield, should have been one of those pieces of legislation researched by the candidates as this applies to the USA and the UK.

The Safe Harbour Scheme and the Privacy Shield were both acceptable responses. A minority of candidates were given a mark for this part of the question.

Question 5 (b)

(b) Explain how this scheme aims to protect this data.

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.....[4]

Candidates were able to access marks for this part of the question, even if they did not get marks for part (a). However, the responses provided by many candidates demonstrated a knowledge gap relating to this part of the unit specification.

Acceptable responses included the fact that both countries had to be deemed to be safe and responsible for maintaining the principle of information security. As the Response Team is based in the UK any response had to consider the transferring of data and information from the UK to the USA.

Question 6

- 6 Explain, using an example, how charts and graphs created from the data held in the Car Database could be used by the car manufacturer.

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[3]

To access all 3 allocated marks candidates needed to include an example in their response. If no example was provided, then a maximum of 2 marks were available. As part of exam technique candidates should be advised that if a question specifically asks for an example then marks will be allocated for this.

Many candidates were able to access all marks allocated to this question. The responses included the fact that data could be presented visually so being able to spot trends and patterns such as the product recall which had happened the most. The excerpt from the Car Database included product recalls where Brake Calipers was given as an example in three instances in December 2018. The inclusion of this product recall in the response would have been given the mark allocated for the example.

Section B overview

Candidates did not need to apply their responses to the Response Team in this section of the external examination.

The scenario for this section related to a marketing company. As such, all examples, where required, should be applicable to this scenario.

Question 7 (a)

7 (a) The online surveys are accessed through the internet.

Describe what is meant by the internet.

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.....

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.....[3]

This was a knowledge recall question requiring candidates to describe what is meant by the internet. Many candidates were able to access marks by providing responses that defined the internet as a global network of interconnected devices.

Some candidates provided responses that related to the World Wide Web (WWW) and appeared to confuse this and the internet. The WWW is the information that is available through, for example, web sites while the internet is the infrastructure which facilitates the WWW.

Question 7 (b)

(b) The online surveys could be completed using a portable device.

Identify **two** portable devices that could be used.

1.....

2.....

[2]

Most candidates were able to access the allocated marks. However, some candidates provided a response of 'phone'. This was deemed to be too vague as this could refer to a satellite phone, a mobile phone or a landline phone.

Candidates should be encouraged to be specific in their responses to help them to access the allocated marks.

Question 7 (c) (i)

(c) Primary and secondary data are collected and used by the marketing company.

(i) What is meant by data?

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.....[2]

This was a knowledge recall question which required candidates to provide a definition of data. Many candidates were able to access the marks for this part of the question by providing responses that included the fact that data is numbers/text without context or meaning.

Question 7 (c) (ii)

(ii) Describe **one** difference between primary and secondary data.

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.....[2]

This question was another knowledge recall question, but it was worrying to see that many candidates were unable to provide a difference between primary and secondary data. The difference is that primary data would be collected by the marketing company while secondary data is collected by a third party.

Question 9 (a)

9 The marketing company stores the data and information that has been collected.

(a) Explain how firewalls could maintain the security of the stored data.

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[3]

This question focused on one of the logical protection methods listed in the unit specification. Candidates were required to explain how firewalls could protect the data and information stored by the marketing company.

Many candidates were able to access 2 out of the 3 allocated marks but did not provide further detail to access the final mark. For example, the most common response stated that a firewall will stop unauthorised traffic accessing the network. To be given the final mark some detail relating to the fact that rules are used to determine whether the traffic can access the network should have been provided.

Question 9 (b)

Data analysis is carried out on the data and information to ensure the processing meets the needs of the client.

(b) Identify and describe **two** stages of data analysis.

1.....

 2.....

[4]

This question focused on the stages of data analysis as defined in LO3.4 of the unit specification. Candidates were required to identify and describe two of the eight stages listed. Many candidates demonstrated a knowledge gap relating to these stages.

Centres must make sure that all areas of the unit specification are covered before candidates being entered for the examination rather than just focusing on the area of the specification required by the research bullets for the case study.

Question 9 (c)

When the data and information has been processed it can be transmitted.

(c) Explain, using an example, how the data could be transmitted.

.....

[4]

Many candidates misinterpreted this question and provided responses that related to connectivity methods such as Bluetooth and Wi-Fi. Those candidates who gained marks for this question provided responses that related to the use of email or hard copy. These candidates also provided details about how the transmission method should meet the needs of the target audience.

Question 9 (d)

Some of the clients of the marketing company have asked that the results are accessible to people who have a disability.

(d) Identify and describe **two** information styles that could be used to ensure the results are accessible to people with a disability.

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2.....
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[6]

This question was answered well by the majority of candidates. Candidates demonstrated a good level of knowledge relating to this area of the unit specification with the most common responses being Braille text and subtitles.

Candidates were also able to provide further details relating to who would use these defined information style and how the style would help them.

Question 10 (a)

10 A Level 1 data flow diagram (DFD) has been created to show an open system.

(a) What is meant by an open system?

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..... [2]

This question was a knowledge recall question, but many candidates did not provide responses which were worthy of marks. LO3.6 of the unit specification details two information structures which should be covered during the teaching of this unit – open and closed. The characteristics, benefits and limitations of the structures should also be covered.

An open system is one that can interact with other systems to exchange data/information even if different software/hardware platforms are used.

Question 10 (b)

(b) One connectivity rule for drawing a Level 1 data flow diagram (DFD) is that every flow must be labelled.

Identify **two** other connectivity rules.

1.....

.....

2.....

..... [2]

This was another knowledge recall question with the responses provided by the candidates appearing to be centre dependant. Those centres who had covered LO 5.2 of the unit specification were able to provide two connectivity rules for drawing a L1 DFD.

It was noted that some candidates provided the rule given in the question – every flow must be labelled – as one of their responses. Candidates should be advised that if an example is provided in the question then this should not be included in their response.

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