

Cambridge TECHNICALS LEVEL 3



Combined feedback on the January 2017 exam paper (including selected exemplar candidate answers and commentary)

Unit 2 – Global information

Version 3



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INTRODUCTION

This resource brings together the questions from the January 2017 examined unit (Unit 2), the marking guidance, the examiners' comments and the exemplar answers into one place for easy reference.

We have also included exemplar candidate answers with commentary for Questions 3 and 9.

The marking guidance and the examiner's comments are taken from the Report to Centre for this question paper.

The Question Paper, Mark Scheme and the Report to Centre are available from:

<https://interchange.ocr.org.uk/>

OCR
Oxford Cambridge and RSA

Level 3 Cambridge Technical in IT
05838/05839/05840/05841/05842/05877

Unit 2: Global information

Wednesday 11 January 2017 – Afternoon
Time allowed: 1 hour 30 minutes

Your word name:
Insert (C398)

First Name: Last Name: Centre Number: Candidate Number: Date of Birth:

INSTRUCTIONS

- Use black ink.
- Complete the boxes above with your name, centre number, candidate number and date of birth.
- Answer all the questions.
- Write your answer to each question in the space provided.
- Additional paper may be used if required but you must clearly show your candidate number, centre number and question number(s).

FOR EXAMINER USE ONLY

| Question No | Mark |
|--------------|------------|
| 1 | 15 |
| 2 | 15 |
| 3 | 27 |
| 4 | 15 |
| 5 | 17 |
| 6 | 15 |
| 7 | 15 |
| 8 | 15 |
| 9 | 15 |
| Total | 150 |

INFORMATION

- The case study should be used to answer questions in Section A.
- The total mark for this paper is 150.
- The marks for each question are shown in brackets [].
- Quality of extended response will be assessed in questions marked with an asterisk (*).
- This document consists of 16 pages.

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Level 3 Cambridge Technicals Certificates in IT 05838, 05839
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OCR Report to Centres January 2017

Oxford Cambridge and RSA Examinations

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Unit 2: Global information

Level 3 Cambridge Technical Certificate/Diploma in IT
05838-05842, 05877

Mark Scheme for January 2017

Oxford Cambridge and RSA Examinations

GENERAL EXAMINER COMMENTS ON THE PAPER

This was the first examination series in which this unit was available for assessment. It was noted that many candidates demonstrated knowledge gaps in relation to the unit content. Centres should ensure that candidates are familiar with all areas of the unit content prior to being entered for the external examination.

The correlation between content, context and command word also appeared to be limited. Candidates should be aware of the differing command words, e.g. identify, 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, providing the context for Section A of the external examination. Many candidates appeared to be unfamiliar with the context of the case study, for this external examination the context was Better Cleaning. This apparent lack of familiarity limited candidate's 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 candidates demonstrated a general lack of knowledge and understanding.

There are many resources available which can be used during the teaching of this unit. The OCR endorsed textbook should not be relied on extensively to provide candidates with a full and complete knowledge base for this unit.

Resources which might help address the examiner comments:

From the link below, you'll find 'The OCR guide to examinations' (along with many other skills guides)

<http://www.ocr.org.uk/i-want-to/skills-guides/>

Command verbs definitions

<http://www.ocr.org.uk/Images/273311-command-verbs-definitions.pdf>

CASE STUDY

Organisational profile

Introduction

Better Cleaning is a small independent business which provides cleaning and house move packing services to its clients. The administration staff are based in an office on an industrial estate. The cleaning materials, such as mops and buckets, packing boxes and the vans used by the cleaning staff are also based on this estate.

Services

- The main services provided by Better Cleaning are:
- regular cleaning of properties;
- one-off cleaning of properties e.g. when a house has been sold and the residents have moved out;
- carpet and curtain cleaning;
- oven cleaning;
- ironing;
- house move packing.

Processes and problems

The office staff produce a daily work schedule for the cleaning staff. The schedule is based on the number of hours each service will take to complete and the distance and travelling time between the locations of each property.

Client invoices are sent out at the end of each month. The client account records are stored on a spreadsheet and can be accessed by any member of the office staff. Each client has a unique client number with each service having a different code. An excerpt from the client account records is shown in **Fig.1**. The accounts are also used to create business reports at the end of each month – for example, the monthly income each type of service generates.

There are currently problems with the data held in the client account records. There have been occasions when client invoices have been incorrect. This has been caused by a member of the office staff updating the client account records whilst these are being updated by another staff member ready for printing and sending to the clients.

A suggestion has been made that *Better Cleaning* moves to a paperless method with clients accessing their invoices remotely. This will enable clients to access their invoices at any time. This will, however, require more robust security procedures than are currently in place.

Better Cleaning has recently carried out an audit of the consumables, for example paper and ink cartridges, which are used in the office. This audit has highlighted that paper is being wasted by the reprinting of client invoices following client complaints that these are incorrect. This has also impacted on the increased number of ink cartridges being used.

The owner of *Better Cleaning* has recently received information relating to Green IT and, following the audit of consumables, has decided that Green IT will to be introduced into existing business practices. The introduction of Green IT will have an impact on the business and office staff. The computers currently in use at *Better Cleaning* are to be upgraded and the owner is keen to purchase computers which conform to Green IT policies. It is hoped that introducing Green IT will also have an impact on the cost of consumables and the amount of electricity used.

Appendix

| Client ID | Date | Service Code | Cost (£) |
|-----------|------------|--------------|----------|
| 123 | 26/02/2015 | RC | 50.00 |
| 234 | 26/02/2015 | OFC | 100.00 |
| 123 | 26/02/2015 | IR | 15.00 |
| 789 | 26/02/2015 | OC | 35.00 |

Fig.1

To prepare for the examination, you should research the following themes:

- How different types of information storage media and devices could be used in *Better Cleaning*, including the advantages and disadvantages of each type, and how these could be used to maintain data integrity.
- How the information styles of text, charts and graphs can be used to convey business information.
- The security methods which could be introduced at *Better Cleaning*.
- How Green IT requirements can be conformed to and the impact on *Better Cleaning* and the office staff of introducing these changes in working practices.

The questions in Section A of the examination will require you to draw on your knowledge and understanding which you have gained when researching these themes.

Section A

Section A

This section relates to the case study on Better Cleaning.

1 The cleaning staff at Better Cleaning are given their daily work schedule on paper.

Describe **two** advantages and **one** disadvantage to the cleaning staff of having their daily work schedule on paper.

Advantage 1

.....

Advantage 2

.....

.....

.....

.....

Disadvantage.....

.....

.....

.....

.....

.....

[6]

Mark Scheme Guidance

Points marking approach.

The focus of the question is on the cleaning staff.

Do not allow backups.

Examiner comments

The focus of this question was on the cleaning staff who work for Better Cleaning. This question linked to part of bullet point 1 in the research prompts in the case study.

It was pleasing to note that many candidates were able to provide advantages and a disadvantage of the use of paper. However, many candidates limited their accessibility to the marks by focussing their responses on the company rather than the cleaning staff. For example, whilst paper can be stored in a filing cabinet and used as a reference in case of any issues, this would be an advantage to Better Cleaning rather than the cleaning staff.

2 The client accounts of Better Cleaning are stored on a spreadsheet.

(a) Describe **one** item of confidential business data which is held in the client accounts.

-
- Service code (1) which is unique for each different service/ example given (1).
 - Invoice number (1) total amount per invoice/amount owed (1).
 - Prices (1) of services / example given (1).
 - Client ID (1) these are linked to client contact details (1).
- **[2]**

(b) (i) Identify **one** shared device which could be used by Better Cleaning to enable clients to access their invoices remotely.

-
- Cloud storage device.
- **[1]**

(ii) Describe **one** characteristic of this shared device which makes it suitable for this task.

-
- Manageability (1) Minimal resources will be needed (1).
 - Access method (1) access through secure log-in details (1).
 - Accessibility (1) access available at any time (1).
 - Location (1) documents can be accessed from anywhere with an internet connection (1).
- **[2]**

(c) (i) Identify **one** method which could be used to maintain the integrity of the client accounts. Justify your choice.

Method

..... **Method**

- Justification
- Locking of spreadsheet (1).
 - Any other valid suggestion.
-

..... **Justification**

-
- Only one person can make edits (1).
 - this will stop the data becoming incorrect (1).
 - changes can be made before unlocking (1).
 - Updated information will held in the spreadsheet (1).
 - The information held will be the most up-to-date and will include all edits (1).
 - Any other valid suggestion.
- **[4]**

(ii) Explain how the method, identified in part c (i), will maintain the integrity of this data.

- • Edits will only be made by one person (1) at a time (1).
- • Edits will be saved before unlocking the spreadsheet (1) .this
- enables the data to be up-to-date and accurate (1).
- • The data held in the spreadsheet will be complete (1) and fit-
- for-purpose (1) so client invoices will be correct (1).
- • Any other valid suggestion.
-
-
-
- **[4]**

Mark Scheme Guidance

2 (a)

Points marking approach.

2 (b) (i)

For 1 mark.

Accept examples of brand names.

Do not allow mobile phone app.

2 (b) (ii)

Points marking approach.

Can only be awarded marks if marks awarded for 2b(i).

2 (c) (i)

The method must be correct to enable marks for the justification to be awarded.

1 mark for method, up to 3 for justification.

Accept locking of a component of a spreadsheet.

Do not allow encryption / passwords.

Examiner comments

This question focused on the client accounts which are held on a spreadsheet by Better Cleaning, therefore, all responses to each part of this question needed to be in the context of this. This question linked to part of bullet point 1 in the research prompts in the case study.

Q2 (a) Candidates were provided with an excerpt from the client accounts spreadsheet in the case study. This question required candidates to provide a response which was taken from this excerpt, e.g. Client ID, Prices. If candidates failed to provide a correct item of confidential data, then they were unable to access the marks allocated for this part of the question.

Q2 (b) The case study provided information on how Better Cleaning would hope that clients could access their invoices in future. Many candidates demonstrated knowledge gaps with this question, failing to recognise that access through the Cloud would be most appropriate. Marks were awarded for those candidates who provided brand names as their response. If candidates failed to provide a correct response to part (i) of this question, they were unable to access the marks allocated for part (ii).

Those candidates who did access the marks available for part (i) were able to demonstrate some understanding of suitable characteristics of the Cloud. Acceptable characteristics included accessibility and non-location dependability.

Q2 (c) The focus of this part of the question was related to the integrity of the data currently held on the client accounts spreadsheet. Details were provided in the case study of how incorrect invoices are being produced from the spreadsheet. Candidates had to provide a method which could be used to maintain the integrity of the data. A prompt was given in the case study relating to the current situation whereby two members of the office staff could access the accounts at the same time.

Many candidates failed to provide a correct response for part (i) of this question. This demonstrated a lack of understanding of the content of the case study and failure to carry out comprehensive research relating to the research prompts. It was noticeable that many candidates were unsure as to the meaning of integrity and its relationship to data. A response such as locking the spreadsheet would have been awarded marks for this part of the question.

As with part (b) of this question, if candidates did not access marks for part (i) they were unable to be awarded any marks for part (ii).

Part (ii) of the question required candidates to provide an explanation as to how the method they had selected would maintain the integrity of the data held in the customer accounts spreadsheet. Those candidates who were able to access the marks allocated for this part of the question, by being awarded marks in part (i), once again demonstrated knowledge gaps as to how this method could be used to maintain integrity.

3 The client accounts spreadsheet is used to generate reports at the end of each month.

Discuss how text, graphs and charts could be used in the reports.

Indicative content

- When presenting numerical data text can become confusing for the reader. A graph/chart can provide a better understanding to the reader.
- Visual learners can understand a graph/chart more easily than a series of numbers.
- Graphs / charts can summarise data and make it easier to interpret. The type of chart must be carefully considered based on the data being shown.
- Graphs / charts must be correctly labelled to enable the reader to fully understand the data being shown.
- Text can be used to provide a summary of the data.
- If narrative / facts are included in the report then these are better shown as text.
- The format of the text, e.g. bullets, can be changed to suit the text contents. For example, a bulleted list can be used to provide examples.

[7]

Mark Scheme Guidance

Levels of response marking approach

| | |
|-----------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 5-7 marks | <p>Candidate has shown a detailed level of understanding discussing how text, graphs and charts could be used in the reports.</p> <p>Relevant examples will be used to support discussion and ideas will be expressed clearly and fluently.</p> |
| 3-4 marks | <p>Candidate has shown a good level of understanding explaining how text, graphs and charts could be used in the reports although the explanation could be one-sided.</p> <p>Some example(s) will be used to support explanations which may not be relevant and may at times detract from the fluency of narrative.</p> <p>At the bottom of the mark band the candidate may have described a single point related to how text, graphs and charts could be used.</p> |
| 1-2 marks | <p>Candidate has identified points relevant to how text, graphs and charts could be used in the reports.</p> <p>Limited use of examples to accompany description and ideas will be poorly expressed.</p> <p>At the bottom of the mark band, a single point may be identified with an example.</p> |
| 0 marks | Nothing worthy of credit. |

Examiner comments

This question was marked using levels of response methodology. Candidates were awarded marks based on the level of detail included in their response and the application of their response to Belter Cleaning. This question linked to bullet point 2 in the research prompts in the case study.

The command word for this question was 'discuss' and candidates needed to provide a response which considered the use of text and charts/graphs to access the highest marks. Those candidates who focused on either of these areas limited their accessibility of marks to the lowest/middle mark bands.

The focus of the question was on the use of text and charts/graphs in a monthly generated report. Many candidates were able to provide some discussion on the use of charts/graphs including these can be used to show trends and patterns and can be used to identify the most/least popular cleaning service. The responses relating to the use of text, however, were limited in scope. Acceptable responses could include such areas as the fact that large paragraphs of text can become confusing for the reader and different text styles can be used to emphasise text, e.g. bold/bulleted lists.

Exemplar candidate work

Question 3 – medium level answer

The client accounts spreadsheet is used to generate reports at the end of each month.

Discuss how text, graphs and charts could be used in the reports.

A line graph can be used to compare ^{different pieces of} information & results collected in a spreadsheet to determine what resources need to be taken such as costs etc., and using charts can be used to compare & results. This also allows ^{you} to see how the business is doing in general and what actions should be taken.

Hence, this information written will clearly inform business how they're doing financially and analyse what ~~more~~ processes need to be taken.

[7]

Commentary

The question required candidates to discuss how charts, graphs and text would be used in a report. The report would be generated from the client account spreadsheet. The question was marked using a banded response mark scheme with this candidate being awarded a mark at the bottom of the L2 mark band.

The answer refers to the use of a line graph and how this could be used to determine what resources could be cut to save costs. For this exam an example of the client account spreadsheet was provided in the case study, Better Cleaning.

The candidate has failed to recognise that the client account spreadsheet does not include the resources used when completing each service for a client. The candidate then goes on to say that this will enable the company to see how it is doing and what actions should be taken. This again, does not link with the data held in the client account spreadsheet,

However, in the final paragraph of the answer the candidate does make some mention of being able to analyse. It is not clear however, if this is relating to the use of the line graph or text.

The candidate has provided limited explanation of the use of graphs, charts and text in reports and the answer is not clear. Given that the word 'written' has been used in the final paragraph of the answer, it is possible to assume that this refers to text. The candidate has provided limited evidence of the use of chart, graphs and text but has included, tenuously, all of these. There is little, if any evidence of the use of examples relating to Better Cleaning being included in the answer. By including all components referred to in the question, albeit briefly, a mark at the bottom of the L2 mark band can be awarded.

To achieve a mark in L3 the candidate needed to provide a discussion of the use of charts, graphs and text in a report generated from the client account spreadsheet. There needs to be clear distinction between the components in the answer and how the use of these can enhance the generated report. To move confidently into the L3 mark band, the candidate needed to have provided examples taken from Better Cleaning. These examples should be correct and precise and be clearly linked to a line of discussion.

Exemplar candidate work

Question 3 – high level answer

The client accounts spreadsheet is used to generate reports at the end of each month.

Discuss how text, graphs and charts could be used in the reports.

Graphs and charts would aid the management of Better cleaning in visualising the data. From this management can analyse the data in chart or graph form and then make decisions about the business from the data. For example the charts and graphs could be used to show ~~that~~ who is their most ^{profitable} ~~money maker~~ client, or which service is the most or least ~~used~~ used. From this management could begin promotions on the least used services in an effort to make this specific side of the business more profitable. They could also reward loyal customers making them want to spend more. Overall the charts and graphs aid management in making business decisions by showing current data in a visual form whilst allowing the forecasting of future investments or ideas to be evaluated. The text could be used to explain to management what the graphs and charts mean. labeling axis, explaining forecasting and data types. meaning management get a better understanding about what it is they looking at in order to make better clearer decisions.

[7]

L3-

Commentary

The question required candidates to discuss how charts, graphs and text would be used in a report. The report would be generated from the client account spreadsheet. The question was marked using a banded response mark scheme with this candidate being awarded a mark at the bottom of the L3 mark band.

The candidate has considered how charts and graphs and text could be used in a report generated from the client account spreadsheet. The initial paragraph provides a weak discussion of how charts and graphs can be used to visualise the data being presented. They have also included the fact that the data can be analysed to help make decisions. An example from Better Cleaning has also been provided – they can see which service is the most or least popular.

The candidate then begins to go off topic and they move into how the data can be used by management to target marketing. Although this is a valid point, it does not meet the demands of the question. The answer moves back onto topic by some discussion about data being shown in a visual form.

The candidate moves onto how text can be used with a valid point being made about how text can explain the visual data shown in the charts and graphs. They also mention that text can be used to label the charts.

The candidate has provided some, although limited in places, discussion relating to the use of charts and graphs and text. The examples provided can be implicitly linked to the case study – Better Cleaning.

The examples are not implicitly related to the case study and there appears to be an imbalance in the answer with less discussion relating to the use of text than charts and graphs. For these reasons a mark at the bottom of L3 was awarded.

To reach the top of L3, the balance between charts and graphs and text needed to be equal. Some attempt at the linking of these components, as demonstrated in this answer with text being used to label graphs, should also be included.

The answer should include explicit examples related to the case study. The example provided should also enhance the answer provided by linking and being relevant to the points being made.

In addition to these requirements, a full mark answer should stay on topic throughout an answer which flows and is fluent.

4* Better Cleaning is concerned about the security of the data to be stored on the shared device.

Discuss the security methods which could be used to maintain the security of data on the shared device.

Indicative content

- Usernames and passwords – clients & office staff have unique secure identifications.
- Access levels - office staff may be able to upload and edit accounts, clients may only access and read /download their own invoices.
- Access levels – based on user names & passwords.
- Two-way authentication - when the user and the computer system engage in a two-way, question-and-answer exchange.
- Multi-layer firewalls – to stop unauthorised / unknown access to data.
- Any other valid suggestion.

[10]

Mark Scheme Guidance

Levels of response marking approach

| | |
|------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 7-10 marks | <p>Candidate has shown a detailed level of understanding by discussing more than one security method which could be used to maintain the security of data on the shared device.</p> <p>Relevant examples will be used to support discussion and ideas will be expressed clearly and fluently.</p> <p><i>There is a well-developed line of reasoning which is clear and logically structured. The information presented is relevant and substantiated.</i></p> |
| 4-6 marks | <p>Candidate has shown a good level of understanding by explaining at least one of the security methods which could be used to maintain the security of data on the shared device.</p> <p>Some example(s) will be used to support explanations which may not be relevant and may at times detract from the fluency of the narrative.</p> <p>At the bottom of the mark band the candidate may have described a single security method.</p> <p><i>There is a line of reasoning presented with some structure. The information presented is for the most part relevant and supported by some evidence.</i></p> |
| 1-3 marks | <p>Candidate has identified point(s) relevant to the security method which could be used.</p> <p>Limited use of examples to accompany description and ideas will be poorly expressed.</p> <p>At the bottom of the mark band, a single security method may be identified with an example.</p> <p><i>The information is basic and communicated in an unstructured way. The information is supported by limited evidence and the relationship to the evidence may not be clear.</i></p> |
| 0 marks | Nothing worthy of credit. |

Examiner comments

This question was also marked using a banded response mark scheme but incorporated the quality of the response in terms of correct use of technical terms and coherent 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.

The focus of this question was on the security methods which could be used on the shared device. As this question was not linked with Q2, it was possible for candidates to access the full range of marks even if they failed to score marks in Q2(b). This question linked to bullet point 3 in the research prompts in the case study.

Many candidates demonstrated some knowledge relating to appropriate and differing security methods and were able to access the lowest mark band. Where a description of how differing access levels could be used by Better Cleaning, for example, was provided this enabled candidates to access marks in the lower range of the middle mark band.

Candidates should, as already detailed for Q3, provide examples related to the business described in the case study.

5 Better Cleaning is considering the use of Green IT in the administration office.**(a) Describe the purpose of Green IT.**

-
- To use computers / IT resources (1) in an efficient/ environmentally responsible way (1) and to reduce waste by recycling resources / computers / giving to charity for reuse (1).
 - To reduce carbon footprint (1).
 - Becoming eco-friendly (1).
-
-
- **[3]**

(b) Describe two requirements of Green IT on the office staff.

- 1.....
- To consider before printing (1) and printing only what is required (1).
 - To switch off computer/equipment (1) rather than leaving them on stand-by (1).
 - To recycle (1) ink cartridges/paper (1).
- 2.....
- To store documents centrally/on the cloud (1) instead of printing and storing (1).
 - Any other valid suggestion.
-
-
- **[4]**

Mark Scheme Guidance

5 (a)

Points marking approach.

5 (b) Points marking approach.

Examiner comments

This question focussed on the use of Green IT within Better Cleaning and the requirements of introducing this for the office staff. This question directly related to the last research prompt in the case study.

5 (a)

This part of the question required candidates to provide a description of the purpose of Green IT. It was pleasing to note that many candidates were able to access the majority of the marks allocated to this question.

5 (b)

This part of the question focussed on the office staff. As with Q1, candidates needed to provide responses which related directly to this group of staff within Better Cleaning. Many candidates provided responses related to the recycling of old equipment and reducing the temperature of the office. Whilst these are valid points, they failed to be awarded marks as both these activities would be carried out by other staff within Better Cleaning. Acceptable responses related to the need to think before printing emails to reduce the use of paper and, carrying on from that concept, if paper was used then it should, where possible, be recycled.

Section B

Section B

You do not need the case study to answer these questions.

6 The data analysis process has several stages.

(a) Explain the importance of the 'identify the need' phase of data analysis.

-
- What information is needed (1) needs to be specifically defined (1).
 - If this isn't defined correctly (1) then the information collected may be not what is needed/worthless (1).
 - The purpose of the data analysis (1) needs to be correctly defined (1).
 - If this is incorrectly defined (1) then the process of data analysis will produce worthless information/results (1).
 - Any other valid suggestion.
-
- [6]**

(b) During data analysis information and data may be collected.

Describe the difference between information and data.

-
- Information is in context (1) whilst data has no context (1).
 - Information is data which has been coded / structured (1).
 - Data needs to be processed to become information (1)
-
- [2]**

Mark Scheme Guidance

6 (a)

Points marking approach.

6 (b)

Points marking approach.

To be awarded full marks the difference must be provided.

Examiner comments

6 (a)

This question focussed on one phase, 'identify the need', of the data analysis process. This question was badly answered by most candidates who sat this external examination and demonstrated a large gap in their knowledge.

6 (b)

This part of the question required candidates to provide the difference between data and information. This concept is a fundamental one for a Level 3 candidate but this part of the question was poorly answered by many candidates. An acceptable response could have taken the form of data has no context whilst information is in context.

A large number of candidates felt that data was numbers whilst information was words. This type of response demonstrates a large gap in the knowledge of candidates who took this external examination.

7* The Regulation of Investigatory Powers Act (RIPA) 2000 regulates the way in which surveillance can be conducted and electronic communications accessed.

Discuss how a government organisation could use RIPA to maintain national security.

Indicative content

- Intercepting communications, such as the content of telephone calls, emails or letters.
- Acquiring communications data: the 'who, when and where' of communications, such as a telephone billing or subscriber details.
- Conducting covert surveillance, either in private premises or vehicles (intrusive surveillance) or in public places (directed surveillance).
- The use of covert human intelligence sources, such as informants or undercover officers.
- Access to electronic data protected by encryption or passwords.

[10]

Mark Scheme Guidance

Levels of response marking approach

| | |
|------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 7-10 marks | <p>Candidate has shown a detailed level of understanding by discussing how a government organisation could use RIPA to maintain national security.</p> <p>Relevant examples will be used to support discussion and ideas will be expressed clearly and fluently.</p> <p><i>There is a well-developed line of reasoning which is clear and logically structured. The information presented is relevant and substantiated.</i></p> |
| 4-6 marks | <p>Candidate has shown a good level of understanding by explaining how a government organisation could use RIPA to maintain national security.</p> <p>Some example(s) will be used to support examples which may not be relevant and may at times detract from the fluency of the narrative.</p> <p><i>There is a line of reasoning presented with some structure. The information presented is for the most part relevant and supported by some evidence.</i></p> |
| 1-3 marks | <p>Candidate has identified point(s) relevant to the use of RIPA by a government organisation.</p> <p>Limited use of examples to accompany description and ideas will be poorly expressed.</p> <p>At the bottom of the mark band, a single point related to RIPA may be identified with an example.</p> <p><i>The information is basic and communicated in an unstructured way. The information is supported by limited evidence and the relationship to the evidence may not be clear.</i></p> |
| 0 marks | Nothing worthy of credit. |

Examiner comments

This question was also marked using a banded response mark scheme but incorporated the quality of the response in terms of correct use of technical terms and the coherent use 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.

The question focussed on how RIPA could be used by a government to maintain national security. Many candidates demonstrated that they either did not know anything about RIPA so provided responses relating to a different piece of legislation, e.g. DPA. Many other candidates felt that RIPA could be used to track low level criminals such as shop lifters.

This type of response from candidates reinforces the fact that many of those entered for this external examination had large knowledge gaps.

Acceptable responses to this question could have included the interception of communications where a threat to national security had been perceived or proven and being able to access data which had been encrypted or password protected. Some candidates did understand that RIPA could be used to keep surveillance on potential terrorist groups or to monitor electronic communications based on key or trigger words.

8 A retailer is collecting information about new stock items. The retailer could collect the information from an external source.

(a) Describe what is meant by an external source of information.

-
- A source of data which comes from outside (1) an organisation / system (1).
-
-
- **[2]**

(b) State **one** example of an external source of data which a retailer could use.

-
- Supplier price list (1).
 - Supplier webpages (1).
 - Retailer magazine (1).
 - Any other valid suggestion.
- **[1]**

(c) Identify and describe **one** characteristic of information that should be considered by the retailer.

-
- Validity (1st) the information should be up-to-date (1) as old information may not be valid (1).
 - Bias (1st) the information should not be taken from one source (1) as the collectors of the information may have collected this for a specific purpose (1).
 - Reliability (1st) should be selected / gathered from a source which can be verified (1) example provided / e.g BBC.
 - Relevant (1st) information should only be what is required (1) as incorrect/inappropriate/irrelevant information will not assist in making decisions (1).
 - Accurate (1st) correct information should be gathered and used (1) as inaccurate information may provide false results (1).
- **[3]**

Mark Scheme Guidance

8 (a)

Points marking approach.

8 (b)

For 1 mark.

8 (c)

1st mark for identification, 2 further marks for description.

Identification mark must be awarded before description marks awarded.

Examiner comments

This question focussed on external sources of information which could be used by a retailer and the characteristics of information.

8 (a)

It was pleasing to note that many candidates were able to describe what is meant by an external source of information.

8 (b)

The most common response to this part of the question was 'The Internet'. This was just enough to be awarded a mark. However, centres must take note that the source of external information must be specific to the context of the question. For example, 'Supplier Website' would have been a more robust response to the question.

8 (c)

Candidates had to identify and describe a characteristic of information. If candidates failed to identify a correct characteristic of information, then they were unable to access the marks allocated for the description.

Many candidates were unable to identify a characteristic of information, so limiting the accessibility to the further marks allocated for this question.

Acceptable characteristics could include validity, relevance and reliability.

9 A hotel uses an on-line reservation system to enable guests to book hotel rooms.

(a) Describe the type of www.technology network that is used by the on-line reservation system.

-
- Points marking approach.
-
-
- [2]

(b) Identify the **category of information holders** a hotel would be included in.

-
- For one mark.
- [1]

(c) Guests register their contact details before they use the on-line reservation system.

Describe **one** way in which the hotel could use these details.

-
- To ensure on-line bookings made (1) are confirmed (1).
 - Loyalty scheme (1) put points against the correct account (1).
 - Marketing / publicity (1) to advise of any special offers.
 - To update/inform guests (1) regarding changes to room/dinner reservations (1).
 - Any other valid suggestion.
- [2]

(d) The hotel uses graphics and text on the on-line reservation system.

Describe **two** advantages to the guests of using graphics on the on-line reservation system.

- 1
- Multilingual (1) do not need to fully understand the language to understand what to do (1).
 - Can be used to provide visual cues (1) e.g. red cross for incorrect information entered (1).
 - Any other valid suggestion.
- 2
-

(e) The on-line reservation system has had a breach of security.

Explain two impacts this breach could have on the hotel.

| | | |
|---------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------|
| 1 | <ul style="list-style-type: none"> Loss of reputation (1) guests would feel unhappy with their personal details being stolen (1). Financial loss (1) reduction in guests using the hotel / booking system (1). Payment of compensation (1) guests could sue the hotel if their identities were stolen (1). Penalties from ICO (1) due to failure to protect personal details / breaking DPA (1). Any other valid suggestion. | |
| | | |
| | | |
| | | |
| | | |
| 2 | | |
| | | |
| | | |
| | | |
| | | |

[4]

Mark Scheme Guidance

9 (a)

Points marking approach.

9 (b)

For one mark.

9 (c)

Points marking approach.

9 (d)

Points marking approach.

9 (e)

Points marking approach.

Do not accept generic answers e.g. lose money.

Examiner comments

The focus of this question was on a hotel and an on-line reservation system. As with Q8, candidates needed to apply their responses to this context.

9 (a)

Candidates were required to describe the type of www.technology which would be used by the on-line reservation system. A worrying number of candidates failed to provide a correct response to this question with many providing responses relating to website addresses.

9 (b)

Again, many candidates failed to understand that a hotel would be included in the Business category of information holders. A list of categories which candidates should have a full knowledge of is given in the unit specification.

9 (c)

Candidates had to provide one way in which the hotel could use the contact details of the users of the on-line reservation system. It was worrying to note that many candidates felt these details could be used to provide a booking reference number – this would be provided when the guest completes the process of booking a room using the on-line reservation system. An acceptable response could be to contact a guest by email to provide vouchers for money off a future stay.

9 (d)

It appeared from the responses provided by the candidates that there was some confusion between images and graphics. Many candidates provided responses relating to guests could see what the hotel/rooms look like. An image would provide this rather than a graphic.

The use of graphics on the on-line reservation system could provide, for example, visual clues to the guests, such as a red cross for wrong/incomplete information.

9 (e)

The focus of this question was on the impacts to the hotel of a breach of security. Many candidates were able to access all allocated marks for this question. However, some candidates focussed their responses on the impact to the guest providing such responses as identity theft. Whilst these responses are valid they are not an impact to the hotel and so did not attract marks.

Exemplar candidate work

Question 9 – low level answer

9 A hotel uses an on-line reservation system to enable guests to book hotel rooms.

- (a) Describe the type of **www** technology network that is used by the on-line reservation system.

The ~~www~~ ^{www} technology network used is called Internet. It is ~~Public~~ ^{private} and closed access and allows ~~customers~~ (in the hotel) or employees to use it.

[2]

- (b) Identify the **category of information holders** a hotel would be included in.

Confidential Informational Holders.

[1]

- (c) Guests register their contact details before they use the on-line reservation system.

Describe **one** way in which the hotel could use these details.

The hotel could use it to contact the customer and to see if that customer has stayed before so they can recommend the same room as last time and.

[2]

- (d) The hotel uses graphics and text on the on-line reservation system.

Describe **two** advantages to the guests of using graphics on the on-line reservation system.

1 To illustrate what sort of experience guests can have at the hotel to show the quality of rooms they're offering.

2 This will help advertise their hotel by presenting appealing and possible colourful graphics that appeal to a wide audience.

[4]

(e) The on-line reservation system has had a breach of security.**Explain two impacts this breach could have on the hotel.**

1 ... This is a candidate style answer.

..... 1. Identity theft may happen to guests as their details have been stolen. (x)

..... 2. The hotel will have broken the DPA (1)

.....

2

.....

.....

.....

[4]**Commentary**

9a Candidates were asked to describe the type of online technology which would be used for the on-line reservation system. The stem of the questions provided the context for this in that guests were able to book reservations using the on-line reservation system. The type of www. technology that would be used is the Internet. A description of the Internet was then required. A description of this would be the internet has open access. This candidate identified the type of technology as Intranet, which is incorrect. Marks could have been awarded for further description but the description was incorrect – being private & closed. The description required was public/open access.

9b The candidate identified the incorrect category of information holders. This is a question with only 1 correct answer – business.

9c The question focusses on how the hotel could use the contact details that guests provide when they make a reservation. This candidate correctly identified that the details could be used to contact the guests, so was awarded 1 mark. They failed to then provide further description to be able to access the 2nd allocated mark. An example of an acceptable answer could be to send marketing information about events to be held at the hotel or to advise them of special offers on room rates.

9d The candidate failed to provide any correct answers to this question. It appears from the answers given that the candidate has confused images / pictures with graphics. Graphics are not pictures but include, for example a red cross to show an action carried out by a user on the on-line reservation system is incorrect. The 1st answer provided focuses on the facilities at the hotel including rooms, the example provided by the candidate. This answer does not relate to the use of the on-line system but on the hotels website. The 2nd answer, again, appealing to a wider audience, does not relate to the on-line booking system. Acceptable answers could include, for example, a red star/ * (1) to show that the dates selected are incorrect (1), if the guests do not have English as their first language (1) graphics can be used to provide visual cues as to the actions required, i.e. mandatory fields to be completed (1).

9e The answers given to this question are potentially correct, in that loss of data can result in identity theft and legal action. However, the focus of the question is on the impacts to the hotel. As such the 1st answer provided does not answer the question as this answer focuses on an impact to the guests. The 2nd answer does however attract 1 mark for the point that the DPA has been broken but there is no further detail to be awarded the 2nd allocated mark. To achieve the 2nd mark the candidate needed to expand the answer, for example, the hotel will have penalties, or an example of a penalty, from the ICO (Information Commissioners Office)

Exemplar candidate work Question 9 – medium level answer

A hotel uses an on-line reservation system to enable guests to book hotel rooms.

- (a) Describe the type of www technology network that is used by the on-line reservation system.

Secure socket layer (SSL) ~~x~~ ~~y~~

[2]

- (b) Identify the **category of information holders** a hotel would be included in.

Business ✓

[1]

- (c) Guests register their contact details before they use the on-line reservation system.

Describe **one** way in which the hotel could use these details.

The hotel could use it to contact the customer and to see if that customer has stayed before so they can recommend the same room as last time and

[2]

- (d) The hotel uses graphics and text on the on-line reservation system.

Describe **two** advantages to the guests of using graphics on the on-line reservation system.

1 It makes it easier to understand. The graphics can help the guest identify and understand what they should be doing, making the online registration simpler and quicker.

2 It allows them give them security knowing they are on the correct page and filling in the correct appropriate form for the correct hotel.

[4]

(e) The on-line reservation system has had a breach of security.

Explain **two** impacts this breach could have on the hotel.

- 1 ... This is a candidate style answer.
- 1. 1 the hotel may have to pay money to the guests (1) who have sued them (1)
- 2. 2 Guests give the hotel bad reviews (TV) as they feel the hotel cannot be trusted to keep their details safe. (1)
- 2
-
-
-

[4]

Commentary

9a The candidate provided an incorrect answer. Candidates were asked to describe the type of online technology which would be used for the on-line reservation system. The stem of the questions provided the context for this in that guests were able to book reservations using the on-line system. The type of www. technology that would be used is the Internet. A description of the Internet was then required. A description of this would be the internet has open access.

9b The candidate provided the correct answer for this question.

9c The question focusses on how the hotel could use the contact details that guests provide when they make a reservation. This candidate correctly identified that the details could be used to contact the guests, so was awarded 1 mark. They failed to then provide further description to be able to access the 2nd allocated mark. To achieve this mark a description of why the guest would need to be contacted needed to be provided. For example, to contact the guest (1) to provide money off vouchers for food and drink bought in the hotel (1).

9d The candidate correctly described one advantage of using graphics on the website and was awarded the 2 marks allocated to each description. The 2nd answer provided failed to attract any marks. Security knowing that guests are on the correct page is not a valid answer. Some cyber security attacks direct people to fraudulent websites which use the logo and company house style / graphics of the business they are pretending to be. A valid response could include that if the guests speak a different language then graphics can help understand what to do instead of struggling with text.

9e The candidate has provided an impact to the hotel in the 1st answer. The 2nd answer however only attracts 1 mark. It is possible to give bad reviews to a hotel that has not lost guests details. If the candidate had said that the reputation of the hotel could reduce / be lost than this would have attracted a mark.

Exemplar candidate work – Commentary

Question 9 – medium level answer

A hotel uses an on-line reservation system to enable guests to book hotel rooms.

- (a) Describe the type of www.technology network that is used by the on-line reservation system.

This is a candidate style answer.

The Internet (1) which has closed and private access. (x)

[2]

- (b) Identify the category of information holders a hotel would be included in.

~~Business Information~~ Holder

[1]

- (c) Guests register their contact details before they use the on-line reservation system.

Describe **one** way in which the hotel could use these details.

To use for promotions. They could use the customers contact details to send them information of deals or events occurring, this should lead them to visit again and spend more money.

[2]

- (d) The hotel uses graphics and text on the on-line reservation system.

Describe **two** advantages to the guests of using graphics on the on-line reservation system.

1. This is a candidate style answer.

1. If guests are booking rooms who live in a different country they may not be able to read English well (1) Using graphics means that people using the booking system can understand what to do as the graphics tell them (1)

2. If a mistake is made by the users of the on-line booking system (1) then a red cross or other red thing can be shown. Red usually means stop, so the user will know there is a problem (1)

2

[4]

(e) The on-line reservation system has had a breach of security.

Explain **two** impacts this breach could have on the hotel.

- 1 The customers could see the hotel for letting there personal information get accessed resulting in the hotel losing a lot of
- 2 The hotel will lose reputation and less people will go there resulting in the hotel losing money.

[4]

Commentary

9a The candidate has correctly answered that the type of www. technology that would be used by the on-line reservation system is the Internet. However, they have then gone onto state that this provides closed and private access, which is incorrect. It appears that the candidate has confused the types of access offered by the Internet and an Intranet. To be awarded full marks the candidate needed to provide an answer which related to public / open access.

9b The candidate gained all allocated marks for this question.

9c The candidate gained all allocated marks for this question.

9d The candidate gained all allocated marks for this question.

9e The candidate gained all allocated marks for this question.



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