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Cambridge **TECHNICALS LEVEL 3**

Cambridge **TECHNICALS**

IT

Feedback on the June 2018 exam paper (including selected exemplar candidate answers and commentary)

Unit 2 – Global information

Version 1

ocr.org.uk/ict

CONTENTS

INTRODUCTION

This resource brings together the questions from the June 2018 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 2, 4 and 8(b).

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/Modules/PastPapers/Pages/PastPapers.aspx?menuindex=97&menuid=250

GENERAL EXAMINER COMMENTS ON THE PAPER

It was pleasing to note that the overall performance of the candidates had improved from the January 2018 session. However, it was also noted that many candidates still 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, 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. Many candidates appeared to be unfamiliar with the context of the case study, for this external examination this was Progress LakeSailing. 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 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 the 'Summer 2017' session. The exemplar candidate answers and commentary document is available form OCR Interchange (login required).

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

PRE-RELEASE MATERIAL

Organisational Profile

Introduction

Progress LakeSailing is a sailing Club based on the shores of Lake Windermere in The Lake District. The Club runs an annual regatta where competitors compete for trophies. The regatta attracts competitors from all over the North of England. Permission has to be granted by The Lake District National Park (LDNP) for the regatta to take place each year as LDNP controls what happens on and around the lake.

There are many different classes in the regatta, each with different rules and regulations. A maximum number of competitors can enter each class.

The Club is able to arrange berths for the boats and, if needed, accommodation for the competitors. There are a limited number of available berths on Lake Windermere, some of which have length restrictions. Some berths are positioned in very shallow water.

Progress LakeSailing can also hire boats to competitors. Boats can be hired to competitors if:

- they are unable to transport their own boat;
- they do not own a boat of their own.

There are, however, a limited number of boats to hire in each class.

Regatta Administration

The regatta is advertised in specialist sailing magazines and also on the Club's website. Entry forms are available to download from the website. The completed entry forms can be returned to the Club by email or post. No entries are accepted by phone.

As each entry is received by the Club, it is dated. Entry forms which are received by email are printed and then dated. On the day after the closing date for entries, the entry forms are sorted into classes and then put into date order, starting with the earliest date.

Those competitors whose entry has been successful, based on maximum numbers in each class, are informed and asked to confirm their entry. Any entrants who have been unsuccessful are informed and put on a waiting list.

Once entries have been confirmed then hire boats and berths are allocated.

Entry and Regatta Records

The regatta has a maximum of 300 competitors with some competitors competing in more than one class.

The competitor entries are initially kept on paper which can cause errors as updates may not be recorded. As each competitor confirms their entry the data is input into a single table database which has no security. This is then used to print out details of the competitors in each class.

The entry database records data on:

- competitor details such as competition number, name and contact details;
- details of boats including length and name;
- berth locations, length and water depth;
- class(es) entered.

These details are then manually input into a spreadsheet which is used during the regatta.

During the regatta, the timing office is located in a hut on the shores of Lake Windermere by the finish line. A laptop is used to access and use the spreadsheet. As each competitor finishes the race their time is recorded on the spreadsheet. When the class has been completed the results are then uploaded to *Progress LakeSailing*'s website along with a photograph of the winning crew and boat.

The timing office uses a dongle provided by a phone company to access the internet. Neither the entry database nor the regatta results spreadsheet are backed up. After each regatta, the database and spreadsheet are deleted with no copies held.

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

- How different types of information storage media and information styles could be used by *Progress LakeSailing*, including the advantages and disadvantages of each type.
- The logical and physical security methods which could be introduced and used by *Progress LakeSailing*.
- Differing types of internet connections which could be used by *Progress LakeSailing* during the regatta and how these could be affected by the location of the regatta.
- Legal requirements, including Green IT, and how *Progress LakeSailing* can comply with these.

Questions 1(a) and (b)

Answer **all** the questions.

SECTION A

This section relates to the case study on Progress LakeSailing.

1   It has been recommended that Progress LakeSailing backs up the entry database to a memory stick.

   (a)   Identify the type of information storage media in which a memory stick would be included.

   - Solid state (media)/SSD (1)   ..[1]
   - Flash drive/memory (1)

   (b)   Describe **one** advantage and **one** disadvantage to Progress LakeSailing of using a memory stick to back up the entry database.

   Advantage ....   **Possible advantages to Progress LakeSailing include:**   ......
                        - Memory sticks can be encrypted (1) meaning the data can be held
   ....   securely/conform with DPA (1)   ......
                        - Passwords can be used (1) to increase the security of the personal
   ....   details of the competitors (1)   ......
                        - Portable (1) so can be kept by timing office staff at all times/can be
   ....   used in any device (1)   ......
                        - If dropped in water/Lake Windermere (1) data can still be retrieved
   Disadvantage...   (1)   ......
                        - No moving parts (1) so more robust/less likely to be damaged/
   ....   corrupted (1)   ......
                        - Any other valid suggestion

                        Possible disadvantages to Progress LakeSailing include: ......
   ....   - If the connector becomes damaged (1) the database may become
                          inaccessible/cannot access database (1)
                        - Easily lost (1) someone else could access the information/e.g. they [4]
   ....   can fall out of a pocket or left in a machine (1)
                        - If ejected incorrectly (1) the contents could become corrupted (1)
                        - Any other valid suggestion

Mark Scheme Guidance

Question 1(a):

For 1 mark.

Question 1(b):

Up to two marks for each of two descriptions.

1 advantage described, max 2 marks.

1 disadvantage described, max 2 marks.

Allow fast to back up IF compared with another appropriate storage media.

Do NOT accept lack of capacity or high capacity.

Examiner comments

This section of the external examination was directly linked to the case study, Progress LakeSailing.

The focus of this question was on the use of a memory stick to backup the entry database and the different protection methods that could be used. This question linked to bullet points 1 and 2 of the research points.

Question 1(a) – Part (a) of the question required candidates to identify the type of information storage media a memory stick is included in. Many candidates were able to correctly identify this as being Solid State media.

Question 1(b) – Part (b) of the question required candidates to describe an advantage and disadvantage of using a memory stick to back up the entry database. Many candidates were able to provide a response that included the fact that a memory stick is portable and so could be used in different devices and that because a memory stick is small it can be easily lost. Some candidates felt that a memory stick did not have a large enough storage capacity to store all the entrants to the regatta. In the case study, it was clearly stated that there were only 300 entrants to the regatta and, as such, responses relating to storage size were not valid.

Questions 1(c) and (d)

There is currently no security on the entry database or on the laptop used during the regatta.

(c) Explain how using passwords would increase the security of the entry database.

> **Possible explanations of how password use would increase the security of the entry database include:**
> - A password restricts access to the database (1) without a correct password (1) the contents of the database cannot be accessed (1)
> - Can be used with a user ID (1) to authenticate the user (1) so access to the database can be limited to a specific group of users (1)
> - Can be used to encrypt the database (1) so will be harder to access the data (1) if unauthorised access occurs (1)
> - Any other valid suggestion

....**[3]**

(d) Identify and describe **one** physical protection method which could be used to secure the laptop used in the timing office during the regatta.

Protection method ....

Description...

> **Possible physical protection methods which could be used to secure the laptop used in the timing office during the regatta include:**
> - Biometrics (1st) finger print/eye scanners (1) confirm the identity of the user (1)
> - Locking laptop away (1st) if no-one in office (1) so it is out of view (1)
> - Using a safe (1st) as only those authorised (1) will have the key/combination (1)
> - Not leaving office unattended (1st) a race official must be present (1) to reduce chance of laptop being stolen (1)
> - Keeping laptop above flood/water line (1st) the office is on the shores of a Lake (1) so water does not damage laptop/so data on laptop is secure from water damage (1)
> - Locks (1st) only people with the key/number (1) can access the laptop/office (1)
> - Any other valid suggestion

[3]

Mark Scheme Guidance

Question 1(c):

Up to three marks for explanation.

Accept answers relating to the reason why NOT having a password would increase security.

Question 1(d):

1st Mark – Identification of appropriate physical protection method.

2nd and 3rd Marks – Description of method.

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

The focus of this question is on physical methods so do NOT mark any logical methods.

The method must be appropriate to the regatta, for example use of security guards would not be appropriate.

Locks can be taken to mean padlocks/door locks/physical device locks/keypads

Examiner comments

Question 1(c) – Part (c) of the question required candidates to explain how a password could be used to increase the security of the entry database. Many candidates were able to explain that a password would only give access to those who knew that password. However, there were many instances of candidates explaining what a password is and how it should be constructed. For example, a password should include a range of characters including numbers, letters and special characters. This type of response did not answer the question and, as such, gained 0 marks.

Question 1(d) – Part (d) of the question required candidates to identify and describe a physical security method that could be used to secure the laptop in the timing office.

If candidates failed to identify a suitable method then they were unable to access the marks allocated for the description.

It was unfortunate that some candidates failed to comprehend the fact that this part of the question require a physical protection method. There were also many instances of candidates identifying security guards. This would not be appropriate in the context of Progress LakeSailing. However, many candidates were able to identify a relevant physical protection method and were able to gain marks for the description.

Question 2

> **2** The results of each race in the regatta are recorded using a spreadsheet.
>
> Describe **two** advantages and **one** disadvantage of using a spreadsheet for recording the results of the regatta.
>
> 1 ....
>
> ....
>
> ....
>
> ....
>
> 2 ....
>
> ....
>
> ....
>
> ....
>
> Disadvantage ...
>
> ....
>
> ....
>
> ....
>
> [6]

Possible advantages of using a spreadsheet for recording the results of the regatta include:
- Different worksheets can be used (1) for the times/results of each class (1)
- Validation can be set (1) to ensure data entered is in the correct format (1)
- Filters/Queries/sorts can be run (1) example of query e.g. to show the boats in each class (1)
- Use of calculations/functions/formula (1) can reduce errors when calculating the winners of a class/for fast and/or accurate production of results (1)
- Automatic recalculation (1) to ensure that running points totals are updated (1)
- Cells can be protected (1) so structure of spreadsheet can be set up in advance (1)
- On paper mistakes can be difficult to correct (1) a spreadsheet can be used to correct mistakes efficiently (1)
- Any other valid suggestion

Possible disadvantages of using a spreadsheet for recording the results of the regatta include:
- If incorrect figures/times are input (1) then the results will be incorrect (1)
- If the functions/formulae are set up incorrectly (1) then calculations/results will be incorrect (1)
- If not backed up regularly (1) then data may be lost (1)
- Manual input (1) so errors could be introduced (1)
- Any other valid suggestion

Mark Scheme Guidance

Up to two marks for each of three descriptions.

2 advantages described, max 2 marks each 1 disadvantage described, max 2 marks.

Examiner comments

The focus of this question was on the use of a spreadsheet when recording the regatta results. This question linked to part of bullet point 1 in the research points in the case study.

Candidates needed to describe 2 advantages and 1 disadvantage of using a spreadsheet to record the regatta results. Many candidates were able to provide good responses to this question demonstrating a good level of knowledge and understanding. However, there were many instances of candidates providing responses that related to the generic aspects of spreadsheets rather than applying these to the recording of the results.

Exemplar candidate work

Question 2 – Low level answer

> 2 The results of each race in the regatta are recorded using a spreadsheet.
>
> Describe **two advantages and one disadvantage** of using a spreadsheet for recording the results of the regatta.
>
> 1. A advantage of using a spreadsheet for recording results is that once you have entered all the information you can then turn it into a chart or graph so that it is easier to see.
>
> 2. Another advantage is that with a spreadsheet you can see trends or patterns if the information is turned into a graph. This means that you will be able to see who got the highest, lowest or in the middle.
>
> Disadvantage A disadvantage of a spreadsheet is that people may not understand it and it could seem complicated to see some people. Furthermore, if it seem complicated or people do not understand it then it could be seen as unuseful. [6]

Commentary

The focus of this question was on the advantages and disadvantages of using a spreadsheet for recording the results of the regatta. The answers should, therefore, be applied to the case study as with all questions in Section A of the question paper.

The candidate has, in answer 1, provided an answer relating to the fact that the data could be turned into charts and graphs. The answer implies that this process is completed after the regatta. As such a mark has been awarded but the answer is not clear as to when this process takes place.

Answer 2 is a repeat of answer 1. The candidate is, again, referring to charts and graphs and the fact that these can be used to identify and trends and patterns. As this mark was awarded in answer 1, no further marks have been awarded.

Answer 3 is a generic disadvantage of the use of spreadsheets and is not applied to either the question or the case study, Progress Lake Sailing. Generic answers, such as this, are not appropriate in Section A of the question paper where all answers should be applied to the case study.

To improve the answer the candidate needed to provide focussed answers in the context of Progress Lake Sailing. In addition, answers relating to the use of pre-defined calculations or automatic recalculations and pre-defined validation routines to ensure

that, for example, only numbers are entered in the time taken to complete a race should be included. The answer relating to the disadvantages could include functions being set up incorrectly which could lead to incorrect results being issued to the competitors.

Question 3

3 During the regatta, the results are uploaded to the website.

(a) Identify the type of internet connection which is used by the timing office during the regatta.

Types of internet connection include:
- Mobile data network (1)
- 3G/4G (1)
- Wireless hotspot (1)

..**[1]**

(b) Describe **three** reasons why the location of the timing office could affect the speed of internet access.

1..

Reasons why the location of the timing office could affect the speed of internet access include:
- The location of Lake Windermere (1) could mean that internet access is varied/ intermittent (1)
- Physical factors/hills/woods (1) can decrease the speed of the internet connection (1)
- Weather (1) can cause intermittent service (1)
- Mobile network speed may be degraded (1) due to distance between masts (and geographical issues) (1)
- Connection/upload speeds may be slow (1) due to physical location of the timing office (1)
- Increased number of devices connecting (to infrastructure/masts) (1) will slow down access for all devices (1)
- Any other valid suggestion

2..

3...

....

....

....

[6]

(c) Speed is **one** characteristic of an internet connection.

Identify **one other** characteristic of an internet connection.

- Range (distance) (1)
- Strength (1)
- Latency (1)
- Bandwidth (1)
- Contention (1)
- Storage capacity (1)
- Any other valid suggestion

..**[1]**

Mark Scheme Guidance

Question 3(a):

For 1 mark.

Question 3(b):

Up to two marks for each of three descriptions.

To award marks for speed this must be quantified.

Question 3(c):

For 1 mark.

Examiner comments

The focus of this question was on the internet access at the regatta. This question linked to bullet point 3 in the research points in the case study.

Question 3(a) – Part (a) of the question required candidates to identify the type of internet connection that is used during the regatta. The case study provides information about how the internet is accessed during the regatta – by using a dongle. Many candidates were able to provide an acceptable response to this part of the question. However, there were many instances of candidates providing 'dongle' as their response. This response did not provide the type of internet connection, simply the device through which the internet is accessed. As such, this response gained 0 marks.

Question 3(b) – Part (b) of the question focussed on the location of the timing office and how the location could affect the speed of the internet access. Many candidates were able to provide some indication relating to the geographical location of the timing office, with some consideration of the method of internet access, and how this can slow down the speed of internet access. Acceptable responses included the fact that there are hills and mountains in the LDNP which can slow down the speed and that water, being on the shores of Lake Windermere can also slow down the speed. There were many other responses provided which demonstrated a full understanding of the case study and that the research points had been fully covered by the candidates.

Question 3(c) – Part (c) of the question required candidates to identify a characteristic of an internet connection. Despite 'speed' being provided in the question with candidates being asked for one other, a number of candidates provided speed as their response.

Question 4

4* Progress LakeSailing uploads a photograph of the winning crew and boat for each class in the regatta to the website.

Discuss the implications of the Copyright, Design and Patents Act when using these photographs.

[10]

Indicative content
- An Act passed to ensure that people who create a photo/image/music/text can be paid if it is used.
- To provide protection to the creators of work if it is stolen or used without their permission
- The creator of an image can charge PLS for their image to be used or ask PLS to acknowledge them as the creator of the photo on the website.
- Allows the creator of an image to control the rights to use the image so if PLS used a photo without permission, the creator of the photo can ask for it to be removed or a fee to be paid for continued use.
- To enable the creator of an image to give permission to use it. If PLS want to use a photograph taken by someone else they must ask for permission to use it
- The Act enables the ownership of a work to be established.
- The Act does not stop the image from being used/taken but gives the creator of an image the right to prosecute people who use their works without permission
- Any other valid suggestion

....

Mark Scheme Guidance

Mark band 3 (7 – 10 marks)

The learner has shown a detailed level of understanding by discussing the implications of the CD&P Act. The learner is able to provide a clear discussion of more than one clear implication. Examples used to support discussion may be superficially related to scenario.

Subject specific terminology and knowledge will be clearly used to support and inform the discussion.

There is a well-developed line of reasoning which is clear and logically structured. The information presented is relevant and substantiated.

Mark band 2 (4 – 6 marks)

The learner has shown a good level of understanding by explaining the implications of the CD&P Act. Explanations may concentrate on one implication, with, at the lower end of the mark band, limited depth. Some examples/scenario may be used to support discussion but may not be relevant and may at times detract from fluency of narrative.

There is a line of reasoning presented with some structure. The information presented is in the most part relevant and supported by some evidence.

Mark band 1 (1 – 3 marks)

The learner has identified points relevant to the use of CD&P Act, description and ideas will be poorly expressed.

Subject specific terminology may be limited or missing. 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.

0 marks Nothing worthy of credit.

Examiner comments

This question was marked using a banded response method. Candidates were awarded marks based on the level of detail included in their response, and the application of their response to Progress LakeSailing. The question also 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. This question linked to bullet point 4 in the research points in the case study.

The focus of the question was on the implications of the Copyright, Designs and Patents Act when Progress LakeSailing using the photographs of the winning crews and boats.

To be awarded a mark in the middle mark band candidates needed to provide a description of at least one implication. Examples also needed to be provided which related to the case study, Progress LakeSailing.

Many candidates were able to provide a description of at least one implication. The most common implication was that if someone else using these photographs off the website and the actions that could be taken by Progress LakeSailing. However, candidates were unable to provide further implications to Progress LakeSailing.

The level of detail provided and the evidence of explanations, with appropriate examples related to Progress LakeSailing, enabled candidates to be considered for a mark in the highest mark band. Those candidates who were awarded marks in the highest mark band considered the inclusion of any sponsor logos being captured in the photographs and the actions that Progress LakeSailing would have to take to include these in the photograph on the website.

It was evident that candidates had some knowledge of the Copyright, Designs and Patents Act, but this knowledge appeared to be limited and was, at the lower range of marks, not applied to the case study.

Exemplar candidate work

Question 4 – Medium level answer

4* Progress LakeSailing uploads a photograph of the winning crew and boat for each class in the regatta to the website.

Discuss the implications of the Copyright, Design and Patents Act when using these photographs.

[10]

> The copy right, Design and patents Act 1988, defends the creative rights of the author of a product, for instance for progress lake sailing it prevents any of the photographs taking from being used by anyone else without the permissions progress Lake sailing, if the images were ~~taking~~ used elsewhere without permission then legal actions can be ~~taking~~ implicated ~~for Also~~ instance fines or court cases.
>
> They would need permission for whom they have taking the photographs of If they can use it. Also stop prevents unwanted duplication of the photographs without authorisation

Commentary

The question was marked using a banded response mark scheme where marks were included for the structure of the answer, how the ideas are expressed, and the inclusion of examples. Where the quality of the response is to be considered when the script is being marked is denoted by a * next to the question number. Candidates are informed of this on the front cover of the question paper in the section labelled 'Information'.

The candidate has provided an explanation of one implication of the Copyright, Designs and Patents Act. This implication can be found in the first paragraph of the answer. The candidate has provided a brief explanation of the fact that if anyone outside Progress Lake Sailing wants to use the photographs then permission must be gained, or legal action could be taken. The second paragraph of the answer simply repeats the implication already covered.

There is little, if any, application or examples relating to the case study apart from the fact that the name of Progress Lakes Sailing has been used.

Based on these a mark in the middle of mark band two can be confidently awarded.

To fully meet the requirements of mark band three, the highest level, evidence of a clear discussion of more than one implication should be provided. In addition to this, examples relating to the case study should also be provided. To fully meet the requirements of the highest mark in mark band three the answer should contain the correct use of specific terminology with the answer demonstrating a clear flow of reasoning in a logical structure.

Question 5

5   One of the conditions set by The Lake District National Park (LDNP) for allowing the regatta to take place on Lake Windermere is that Green IT will be used.

(a)   Describe **one** action that could be taken during the regatta to conform to this condition.

> **Actions that could be taken during the regatta to conform to this condition include:**
> - Recycling (1) including paper/ink cartridges/using for different uses (1)
> - Using environmentally friendly ink (1) does not contain solvents/easier to fully recycle (1)
> - Switching off lights/computer equipment (1) when no one is in room/not being used (1)
> - Printing (1) only printing what is actually vital (1)
> - Setting automatic timers (1) to switch off devices/put into sleep (standby) mode after a specified time of non-use (1)
> - Storing/accessing data online (1) rather than printing documents (1)
> - Use of solar/wind power (1) to charge portable battery charging packs for devices (1)
> - Turning monitor brightness down (1) to conserve energy use (1)
> - Any other valid suggestion

.....[2]

(b)   Explain **two** benefits to the organisers of the regatta of using Green IT.

1..
> **Benefits to the organisers of the regatta of using Green IT include:**
> - Energy costs/use (1) will be reduced (1) as power is not being wasted/lights not being left on (1)
> - Consumables (1) will be reduced in use (1) leading to less cost for PLS/less going to landfill (1)
> - Image of PLS (1) will be enhanced (1) as operating in the LDNP/consideration of environment (1)
> - Reduction of carbon footprint (1) reducing impact on Lake Windermere (1) reducing global warming/emissions (1)
> - Protects environment (1) as in National Park (1) meaning more likely to be able to hold regatta in future years (1)
> - Increased security (1) as data can be stored on the cloud (1) reducing chances of paper being lost (1)
> - Any other valid suggestion

2..

[6]

Mark Scheme Guidance

Question 5(a):

Up to two marks for description.

Question 5(b):

Up to three marks for each of two explanations.

Examiner comments

The focus of this question was on the condition set by the LDNP for Green IT to be used at the regatta. This question linked to bullet point 4 in the research points in the case study. It appeared that many candidates had focussed their research on the wider environmental issues that could arise rather than on the specific use of Green IT.

Question 5(a) – Part (a) of the question focussed on one action that could be taken to conform to this condition. This part of the question was, generally, answered very well with most candidates achieving the 2 allocated marks. The most common response was that any paper/ink cartridges used should be recycled. A further response, which demonstrated good research, was that entries could be uploaded to the Cloud so reducing the amount if consumables used.

Question 5(b) – The response to part (b) of the question were very variable. Some candidates failed to read the question correctly, which limited their accessibility to the allocated marks. The focus of the question was on the benefits to the organisers of using Green IT. As such, generic response such as better for the environment, with no application to Progress LakeSailing, failed to attract any marks.

Those candidates who provided benefits to the organiser generally achieved good marks for this part of the question. Acceptable responses included, for example, the image and reputation of Progress LakeSailing would increase which could lead to an increase in the number of entrants or spectators, which could lead in increased profits.

Questions 6 and 7(a)

SECTION B

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

6   In a L1 data flow diagram (DFD) there are rules relating to the linking of components.

Complete the table below to show if components can be linked.

Use a tick to show an acceptable link and a cross to show an unacceptable link.

The whole table **must** be completed.   **[3]**

Data Flow Links	Data Store	External Entity	Process
Data Store	✗	✗	✓
External Entity	✗	✗	✓
Process	✓	✓	✓

7   A retail organisation uses data and information.

(a) (i)   Explain what is meant by the **public** information classification type.

Possible responses include:
- Information which can be seen by anyone (1) and is in the public domain (1) does not include sensitive information (1)
- Example provided (1) e.g. shop address/Census records/Electoral Roll
- Any other valid suggestion

....

....

....**[3]**

(ii)   Identify **two** stakeholders of this type of information.

Possible stakeholders include:
- Office of National Statistics/ONS (1)
- Credit Reference Agencies (allow examples e.g. Equifax) (1)
- N.H.S (1)   **[2]**
- The general public (1)
- Government (1)
- Security services (1)
- Any other valid suggestion

Mark Scheme Guidance

Question 6:

One mark to be awarded for each correct column.

If no crosses then ticks only can be marked.

Question 7(a)(i):

Up to three marks for explanation.

The answer given could include an example.

Question 7(a)(ii):

For two marks.

Examiner comments

Candidates did not need to apply their responses to *Progress LakeSailing* in this section of the external examination.

Question 6 – This question required candidates to complete a table to show the acceptable and unacceptable links between the components of a L1 DFD.

It was evident that many candidates entered for this examination had little, if any, knowledge of data flow diagrams. Data flow diagrams is included in the unit specification in LO5 – understand the process flow of information.

Question 7 – The focus of this question was on a retail organisation using data and information.

Question 7(a)(i) – Part (ai) of the question required candidates to explain what is meant by the public classification of information. Whilst some candidates were able to provide a response, which attracted marks, there were many others who demonstrated a lack of knowledge. There were many examples of candidates explaining that public information included sensitive information, which could not be shared with anyone. It was this type of response that demonstrated a knowledge gap relating to the different information classification types.

Question 7(a)(ii) – Part (aii) of the question required candidates to identify 2 stakeholders of the public information type. The majority of candidates were able to provide 2 acceptable response.

Questions 7(b) and (c)

Comparability is one characteristic of information.

(b) Identify **two** other characteristics of information and explain why **each** is important.

1.....................

Explanation..

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2.....................

Explanation..

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Possible information characteristics include:
- Validity (1st) the information must be appropriate/valid for the purpose for which it is being used/held (1) invalid information detracts from the purpose of the information (1)
- Bias (1st) information that is one-sided (1) it may be correct but ignores alternative views (1)
- Reliability (1st) information must not be wrong, out of date or inaccurate (1) reliable information has value/unreliable information is less valuable (1)
- Accuracy (1st) information must be accurate/correct/(1) or it is worthless (1)
- Age/up-to date (1st) information can change over time (1) information from the past may no longer be useful/relevant (1)
- Relevance (1st) if information isn't relevant (1) then it is useless/ worthless (1)
- Completeness (1st) all information must be present (1) if any is missing then the information cannot be used (1)
- Any other valid suggestion

[6]

The organisation needs to send a targeted mailshot to customers about a new range of children's toys.

(c) Describe how the text style used in the mailshot should be considered.

Possible ways in which the text style used in the mailshot should be considered include:
- The text style must be easy to read/appealing to customers (1)
- Have to fit in with company house style/may be defined in house style (1)
- Text style must be appropriate to the contents of the mailshot (1)
- Any other valid suggestion

[2]

Mark Scheme Guidance

Question 7(b):

In each of two cases:

1st Mark – Identification of appropriate characteristic of information.

2nd and 3rd Marks – Explanation of why characteristic is important.

The characteristic must be correct to enable marks for the description to be awarded.

Do NOT award marks for comparability as this is given in the question.

Question 7(c):

Up to two marks for description.

Examiner comments

Question 7(b) – Part (b) of the question required candidates to identify 2 characteristics of information and explain why each is important, apart from comparability, which was given in the question. If candidates failed to provide a correct characteristic, they were unable to access the marks allocated for the explanation.

Yet again, this question demonstrated a knowledge gap from some candidates. However, those candidates who were able to identify two appropriate characteristics were able to access most of the 6 marks allocated to this part of the question. Acceptable characteristics included validity, reliability, relevance and bias.

Question 7(c) – Part (c) of the question focused on the text style of a mailshot to be sent to customers advertising a new range of children's toys. Many candidates failed to read the questions correctly and provided response that implied the mail shot was targeted at children rather than the parents, the customers. Acceptable response could include that the text style should relate to the house style or that the text style should catch the eye/be appealing to the customers.

Questions 7(d) and (e)

(d) Explain how a database of customer records could be used to produce the mailshot to customers.

> **Possible ways that a database could be used to produce the mailshot to customers include:**
> - Criteria for receiving mailshot is determined (1)
> - Example e.g. customers who have ordered children's toys in last 6 months (1)
> - Query is used in database (1)
> - To select relevant/appropriate customers (1)
> - Mail merge set up/run (1)
> - Any other valid suggestion

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....**[4]**

Some of the customers of the organisation have a visual impairment.

(e) Identify the information style of the mailshot which could be used for these customers.

> **Possible information styles for the mailshot include:**
> - Braille (1)
> - Audio/speaking/voice advert (1)
> - Any other valid suggestion

..**[1]**

Mark Scheme Guidance

Question 7(d):

Up to four marks for an explanation.

Question 7(e):

For one mark.

Examiner comments

Question 7(d) – Part (d) of the question focused on describing how a database of customer records could be used to create the mail shot. Many candidates were able to achieve marks for saying that the database would be searched to find those customers who have purchased children toys in the past.

Question 7(e) – Part (e) of the question required candidates to state an appropriate text style to be used for the mailshot for those customers with a visual impairment. Many candidates were able to gain the allocated mark; however, there were a large proportion of candidates who provided an incorrect response. Again, this demonstrates a knowledge gap on this area of the unit specification.

Question 8

8 (a)* Discuss how a management information system (MIS) could be used by the Human Resources (HR) department in a multi-national organisation.

[10]

Indicative content

How a MIS could be used by the Human Resources (HR) department in a multi-national organisation include:
- As the organisation is multi-national the MIS will enable all HR departments to share the information.
- Employees can move around the organisation between countries, the MIS will enable their records to be accessed where ever they are.
- Emergency details can be gathered at any time of day or night in the event of e.g. an accident
- Back-ups of information can be taken centrally and kept secure
- Employees can access their records for e.g. holiday requests where ever they are based.
- Holiday requests can be authorised centrally to ensure adequate staff cover is in place
- Job promotions can be handled centrally with MIS being searched for required skills with the existing work force.
- Trends and patterns can be identified e.g. sickness rates at any given location
- Can integrate with Payroll function to ensure pay is correct
- Can analyse HR functions e.g. staffing, succession planning, recruitment and tracking, job role benefits
- Any other valid suggestion

(b) Identify and describe **two** security risks to the MIS.

1...
Possible security risks to the MIS include:
- Unauthorised access/hackers (1st) accessing sensitive/confidential information (1) with the intention of using data for example e.g. identity theft (1)
- Accidental loss of data (1st) staff not saving updates (1) which can lead to incorrect data being held (1)
- Intentional destruction of data/virus (1st) data being accessed (1) and deleted (1)
- Intentional tampering with data (1st) data being accessed and manipulated (1) example e.g. for increased salary (1)
- Any other valid suggestion

2...

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[6]

Mark Scheme Guidance

Question 8(a):

Mark Band 3 (7 – 10 marks)

The learner has explained how a MIS could be used by a HR department and a multi-national organisation.

Subject specific terminology and knowledge will be clearly used to support and inform the explanations.

There is a well-developed line of reasoning which is clear and logically structured. The information presented is relevant and substantiated.

Mark Band 2 (4 – 6 marks)

The learner has described how a MIS could be used by a HR department/a multi-national organisation.

At the bottom of the mark band, the learner may describe generic task(s) that a MIS could be used.

There is a line of reasoning presented with some structure. The information presented is for the most part relevant and supported by some evidence.

Mark Band 1 (1 – 3 marks)

The learner has identified generic points in relation to the MIS.

Subject specific terminology may be limited or missing.

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.

0 marks = Nothing worthy of credit.

Question 8(b):

In each of two cases:

1st Mark – Identification of appropriate security risk.

2nd and 3rd Marks – Description of security risk.

The risk must be correct to enable marks for the description to be awarded.

Examiner comments

This question focussed on the use of an MIS system being used by the Human Resources (HR) department in a multi-national company. The title of this unit is 'Global Information" and, as such, it is expected that some reference as to how information can be used across the global, multi-nationally, should be included in the teaching of the unit.

Question 8(a) – This question part (a) was marked using a banded response method. Candidates were awarded marks based on the level of detail included in their response, and the application of their response to the question context. The question also 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.

To be awarded a mark in the middle mark band candidates need to provide a description of how an MIS could be used with some examples relating to either staff (the HR element) or multi-nationality.

Many candidates were able to achieve a mark in the middle mark band, demonstrating some knowledge of the use of an MIS system and providing some examples relating to either staff or multi-nationality.

In addition to the requirements for the middle mark band, to reach the highest mark band candidates needed to provide an explanation as to the use of an MIS. Examples needed to cover both staff and the multi-nationality of the organisation. The examples did not need to be in any great depth, but both had to be included to be considered for a mark in this mark band.

Acceptable examples could include the use of contact details if there was an emergency if a member of staff was working in a different country, trends and patterns in sickness rates could be identified and compared across different countries and shortages in staff in any given department/country could be quickly identified.

Question 8(b) – Part (b) of the question focused on the identification and description of 2 security risks to the MIS. If candidates failed to identify a correct risk, they were unable to access the marks allocated for the description.

Most candidates were able to identify hacking/unauthorised access and provide some description. There did, however, appear to be knowledge gap about any further security risks. Acceptable security risks included accidental loss of data or intentional tampering with data.

Exemplar candidate work

Question 8(b) – High level answer

(b) Identify and describe **two** security risks to the MIS.

1. Hackers are most likely to come after systems such as this because of the level of importance it holds. The system holds a lot of information which means hackers will want to gain access in order to do malicious acts with the information or to corrupt or destroy information.

2. Another security risk is viruses and malware which is a threat to any system. Viruses, malware can get into the system to either destroy information, to tamper with it or steal it. If any spyware gets into the system the system and all the data that is stored will be vunerable because if it holds bank details, addresses etc. it increases the chances of malicious acts. [6]

Commentary

The focus of this question is security risks to an MIS. The key words for the question are 'identify' and 'describe'. This means that the identification mark must be awarded before marks for the description can be considered.

The candidate has been awarded the identification marks for hackers and virus. This enables the description marks to be considered.

The description of a hacker can be confidently awarded one mark for the second sentence of the answer. This mark has been awarded for the description of why hackers will want to hack the MIS – corrupting or destroying the information. To be confidently awarded the third allocated mark some indication of, for example, the type of information that is held in the MIS should have been provided.

The description relating to a virus can be confidently awarded the three allocated marks for this part of the question.

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