

Cambridge NATIONALS

COMBINED FEEDBACK ON THE JUNE 2013 EXAM PAPER

UNIT R001: UNDERSTANDING COMPUTER SYSTEMS

ICT Level 1/2



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INTRODUCTION

This resource brings together the questions from the June 2013 examined unit (R001), the marking guidance, the examiner's comments and the exemplar answers into one place for easy reference.

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

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

http://www.ocr.org.uk/qualifications/cambridge-nationals-ict-level-1-2-j800-j810-j820/

Thursday 6 June 2013 - Morning Level 1/2 CAMBRIDGE NATIONAL IN ICT	Cambridge National	Cambridge Nationals
R001/01 Understanding Computer Systems	ICT	ICT
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The number of marks is given in brackets [] at the end of each question or part quantion. The total number of marks for this paper is 60. This document consists of 12 pages. Any blank pages are indicated.		
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PRE-RELEASE MATERIAL

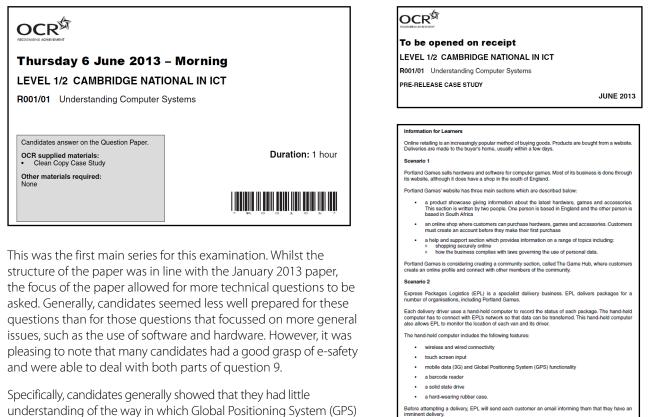
All questions on the question paper are based on a pre-release Case Study which is issued to centres before the examination. The question paper consists of two sections, each comprising short answer and extended response questions.

The pre-release Case Study can be found here:

http://www.ocr.org.uk/Images/167823-question-paper-unit-r001-01-understanding-computer-systems-case-study.pdf

OCR		
Thursday 6 Ju	une 2013 – Morning	
LEVEL 1/2 CAMBI	RIDGE NATIONAL IN ICT	
R001/01 Understandi	ing Computer Systems	
CASE STUDY		
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GENERAL EXAMINER COMMENTS ON THE PAPER



and Radio Frequency Identification Device (RFID) technologies work. It is noteworthy that whilst many candidates are seemingly well aware that their mobile phones have some difficulty with

It is noteworthy that whilst many candidates are seemingly well aware that their mobile phones have some difficulty with accessing a telephone signal from more than a few miles away. Some candidates missed the point of the question and described how a navigation system may aid a traveller to move from Point A to Point B.

Many candidates also confused RFID and GPS technologies and either gave vague answers to questions 6c and 7a or the same answer for both. There was similar confusion with question 6a.

As with the January paper, candidates were asked to complete an extended answer. The specific focus of this question was on the impact on Portland Games of setting up a community section. Whilst there was some evidence that candidates were better able to deal with such questions than in January, a significant proportion of candidates answered in terms of advantages to customer and so wrote an answer that was generally weak. Where candidates did answer the question correctly, many dealt solely with positive or negative impacts and so restricted their overall mark. Centres are advised that where the question requires 'discuss implications', candidates should be advised to discuss both positive and negative implications.

Question 1

1 Pc		based on scenario 1 in the case study a Answer all questions.	and your background research.
	rtland Games has a website	·	
	rtland Games has a website		
(a		that it uses to sell hardware and softwa	re.
	Identify one input device t	hat could be used to enter text onto the	e website.
	Mouse		[1]
		Keyboard	
		Microphone	
		• Touch screen	
		et up an account by completing a form of	
		vill need to choose a username and ente e used on the Portland Games website i	
			must be unique.
		ws who each person is (1 mark)	
	and they won't be confu	used with others/so delivery goes to	o the correct person (1 mark)
	Other example answers:		
	· · · · · · · · · · · · · · · · · · ·	o identify each user (1 mark)	
	and to enable it to mat password (1 mark)	ch the username to the account's	S[2]
(c)	Explain how the form could	d make sure that John can enter only a v	valid country name.
•		from a drop down list (or equiva	
	••••••	nly accept answers from that list/r	
	answers (1 mark)		

Mark Scheme Guidance

- 1 (a) Accept any answer that could be used to input text.
- 1 (b) One mark for each of two valid points.
- 1 (c) One mark for each of two valid points.

Equivalent answers to a drop-down would include:

- List of options
- Scroll menu

The question asks how **the form** can ensure that a valid country is entered. Do not reward answers which rely on John to ensure that he makes the correct entry (eg "John must type in a valid country name").

Examiner comments

Part a of this question was intended to provide candidates with a relatively simple question in order to boost confidence. Most candidates correctly identified "keyboard" for this question, although equivalent alternatives would have been acceptable.

Parts b and c were slightly more demanding, although candidates did appear to find the questions slightly more complicated than had been expected. Question b was looking for an answer that demonstrated the role of a user name in identifying individual users, whilst question c required candidates to explain how the online form could ensure that the user only entered a valid country name. Whilst many candidates explained how features such as drop-down lists could be used to good effect here, other candidates slightly missed the point and gave answers that either did not guarantee the country name was valid, or simply stated "validation", with no attempt at explanation.

Question 2

2 The information that John gives when he creates his new account is stored on a database.

- (a) State **one** output device which can be used to produce a hard copy of the information stored in the database.
 - Printer

......[1]

(b) Describe **three** features of database software that make it suitable for storing and analysing customer information.

¹ Fields (1 mark) to store each category of information (1 mark)

2 Records (1 mark) to enable each customer's information to be stored (1 mark)

³ Key field (1 mark) to ensure each customer record can be identified (1 mark)

Other example answers:

.....

- Tables (1 mark) To store sets of related information eg contact details, order history/that are linked (1 mark)
- Queries/searches (1 mark)
 Enable information in tables to be interrogated
- Reports (1 mark) To produce visual displays of queries (1 mark)
- Switchboard (1 mark)
 To enable access to the main parts of a database (1 mark)
- Forms (1 mark)
 To enter data (1 mark)
- Sort (1 mark)
 So that data can be put in order (candidate may specify an order or a reason (1 mark)
- Easy to edit (1 mark)

Mark Scheme Guidance

2 (b) Award one mark for each of three features.

Award one mark for a description of each feature.

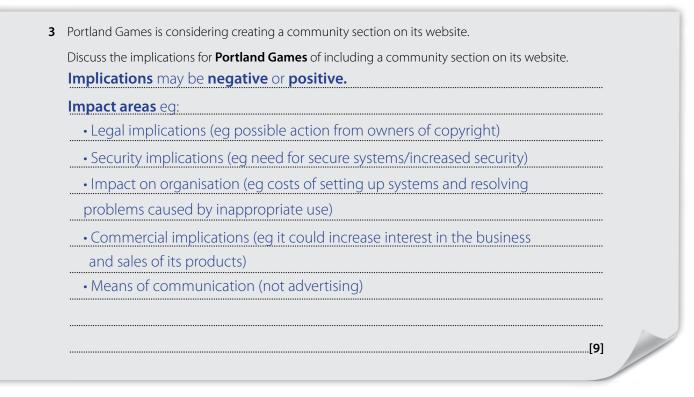
Only award description marks for answers which are applied to the storing and analysing of customer information. However, storing covers a lot of issues, from the initial entry, through to validation and overall security. Answers must relate to database software not database facilities of other types of software.

Examiner comments

Part a was, again, a simple question intended to reduce candidates' anxiety levels. However, unlike question 1a, where many candidates were successful, a significant proportion of candidates gave answers that referred to data storage, rather than the creation of a hard copy.

Part b of the question further developed the use of databases and asked candidates to give features of database software that makes it suitable for storing and analysis of customer information. The mark scheme was structured so that candidates could discuss either analysis or storage and was quite generous in the features that could be discussed. Whilst some candidates were able to deal with the question well, many failed to score above single marks for this question. In most cases, these single marks were awarded for a reference to security or the use of tables.

Question 3



Mark Scheme Guidance

Level 3 (7–9 marks)

The response demonstrates clear understanding of the question. The answer will have a clear discussion of different **impact areas**, with at **least one negative** and **one positive implication**. The discussion will be in some depth and make clear points about the implications of this action. Subject specific terminology is used accurately and appropriately.

Level 2 (4–6 marks)

The response demonstrates fair understanding of the question. The answer will include coverage of a range of implications (**not necessarily from different impact areas**), although these will only concentrate on positive or negative impact. Some subject specific terminology is used.

Level 1 (1–3 marks)

The response demonstrates limited knowledge and understanding of the issues raised by the question. The response may be vague and not fully address the question. The response will consist largely of basic descriptions or listed statements. Subject specific terminology is rarely used.

(0 marks)

Answer not worthy of credit.

Examiner comments

The focus of this question had to be addressed before marks could be awarded. Many candidates failed to address this focus and answered in terms of the customers rather than the business. Where candidates did focus on the actual question; discussing, for example, the benefit to be gained from knowing customers' opinions of new products, they tended to focus on the positive or negative aspects only and so were restricted from accessing the highest mark band.

Question 4 (a)

	- 1
Rakesh and Clare both have computers which are connected to the internet.	
Rakesh would like Clare to check an article he has written.	
(a) Describe one method which could be used to transfer the article from Rakesh's computer to Clare's via the internet.	
Specific process:	
Open email software (1 mark)	
click on paperclip (or equivalent)/attach file/write the email (1 mark)	
 Other example answers: Email (1 mark) as an attachment/as a body of text/which will then be opened/downloaded by Clare/saved to Clare's computer (1 mark) Upload the article to a file-sharing service eg cloud (accept named example) (1 mark) which is synchronised with a folder on Clare's computer/from where Clare gets it (1 mark) Copy the article to a location *eg intranet/file hosting service) (1 mark) that only he and Clare have access to (1 mark) and Clare could download the files herself (1 mark) 	

Mark Scheme Guidance

One mark for a valid method plus one mark for a correct description.

Candidate may describe the general process or give a more specific answer.

The underlined section in the **specific process** above is required for two marks if the specific process is described.

Examiner comments

The question paper changed focus at this stage. This range of foci is a feature of the paper and is one with which candidates need to be well practised. Unfortunately, some candidates did not notice this change and answers tended to be somewhat confused.

The specific focus for this question was on collaboration and security. Part a required candidates to identify a method whereby a file could be transferred from the computer of one member of staff to that of another. Whilst many candidates were able to describe the process of transferring as an attachment via email, some simply stated "email" or "use the cloud" and achieved one mark in each case, whilst others described processes where the file could be accessed, rather than transferred and thereby missed the point of the question.

Question 4 (b) and (c)

	the article he sends to Clare via the internet. Encrypt • Password protect the file • Restrict access to folder
() Clare needs to provide feedback about the article to Rakesh.
	Describe two features of word processing software that Clare could use to provide Rakesh with feedback.
	¹ Tracked changes (1 mark) which shows any changes that Clare has made (1 mark)
	² Add comments (1 mark) by clicking on the comments tool/which are callouts
	² Add comments (1 mark) by clicking on the comments tool/which are callouts (which include comments)/which go in coloured boxes on the side of the
	² Add comments (1 mark) by clicking on the comments tool/which are callouts
	2 Add comments (1 mark) by clicking on the comments tool/which are callouts (which include comments)/which go in coloured boxes on the side of the
	2 Add comments (1 mark) by clicking on the comments tool/which are callouts (which include comments)/which go in coloured boxes on the side of the page (1 mark) [4]

Mark Scheme Guidance

- 4 (b) Question asks for measures to prevent unauthorised **reading**, not unauthorised **editing**, so do not accept responses such as 'make document read only'.
- 4 (c) Answer must be a method by which feedback about content or focus of the article may be given.
 Do not accept 'write on it'; mark as too vague as answer is not clearly using a feature of WP.
 Do not allow to provide feedback.

Examiner comments

Part b required candidates to identify a security method that could be used. The vast majority of candidates did well in this question.

Part c of the question then developed the issue of collaboration and asked for features of word processing software that could be used to provide feedback. Candidates were split into two distinct camps here, with some clearly missing the point of the question and discussing other forms of software that could be used to give feedback (generally focussing on presentation software and desktop publishing software) and others who attempted to give answers that focussed on the use of word processing software only. This second group was very much in the minority.

Examiners were looking for a clear understanding of features that could be used for a very specific purpose and so wanted answers that would clearly give feedback. As an example, candidates were expected to be able to identify features such as 'comment boxes' and how they might be used, as this is a method whereby clear feedback could be delivered. However, where candidates merely stated that 'text could be added', this was considered to be insufficient, as this would not necessarily be seen by Rakesh and so would not give feedback. It is also worth noting that the question required candidates to describe the feature; many described the use of the feature. In such cases, it is possible for full marks to be awarded where the answer does describe the feature within the description of use, but this is not always the case.

Question 4 (d)

(d) Clare would like to use an internet-based video conferencing service to speak with Rakesh. State **one** device that would be needed to take part in this video conference, for each of the following requirements.

Requirement	Device	
Voice input	Microphone	
Moving image input	Webcam	 Other example answers: Video camera Camera
Voice output	Speakers	Headphones
Moving image output	Monitor	Screen VDU TV
Connectivity	Modem	Router Cable Network card
		[5]

Mark Scheme Guidance

Award one mark for each valid device.

Accept valid variants on these terms (eg mobile broadband dongle for connectivity). Wirelesses is not accepted on its own, but accept when with modem etc. Answer requires a device. Internet/Wi-Fi, for example, are not answers for 'connectivity'.

Examiner comments

This question required candidates to identify devices that could be used as part of a video conference.

Candidates were generally able to cope with the question, although few identified a device that allowed for connectivity.

A small number of candidates confused input and output devices and so swapped their answers.

Question 5 (a) and (b)

The questions in this section are	based on scenario 2 in the case study and your back research.	kground
Jane Marsh is a delivery driver for E Jane conects her hand-held comp	Express Packages Logistics (EPL). Before leaving the delive outer to EPL's network.	ery depot,
(a) Identify one type of wired metho	d which she could use to connect her computer to the r	network.
USB (1 mark)	Other example answers:	
	 Firewire (1 mark) Ethernet (1 mark) 	[1
(b) Each hand-held computer can also its security, the wireless network re	o connect to EPL's network using a wireless connection. <i>A</i> equires the use of a security key.	As part of
its security, the wireless network re Describe how a security key is used	equires the use of a security key. I to allow a device to connect to a wireless network. I key (1 mark) and the device will connect to t	·
its security, the wireless network re Describe how a security key is used The user types in the security	equires the use of a security key. I to allow a device to connect to a wireless network. I key (1 mark) and the device will connect to the the second second second second second second second second (1 mark)	he
its security, the wireless network re Describe how a security key is used The user types in the security network if the key is correct (Other example answers:	equires the use of a security key. It to allow a device to connect to a wireless network. If key (1 mark) and the device will connect to the (1 mark) ed (1 mark) to see if it is on a list (1 mark)	·

Mark Scheme Guidance

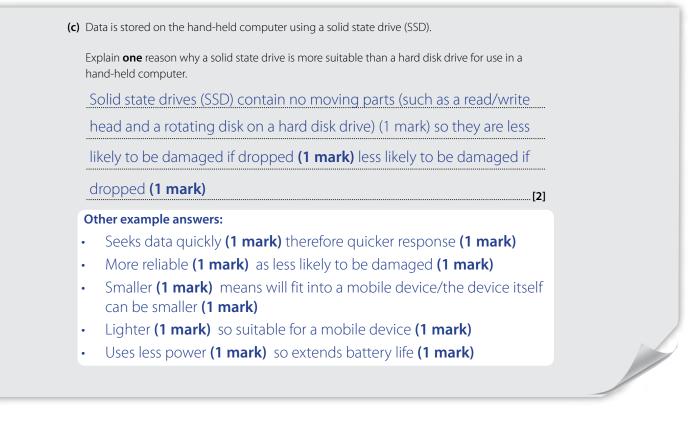
Up to **two** marks for a matched answer. Do not accept cable/network cable on its own.

Examiner comments

Part a of the question required candidates to have some specialised knowledge of the subject area and to give a wired method by which a computer could be connected to a network. The most frequent correct answer given was 'Ethernet'. However, many candidates either repeated the question (with many writing 'wired method') or gave inappropriate answers.

For Part b, candidates generally had some idea that a security key was somehow connected to protecting the system, but were unable to describe how it would allow users to access the system. Many candidates gave general descriptions of security in answer to the question.

Question 5 (c)



Mark Scheme Guidance

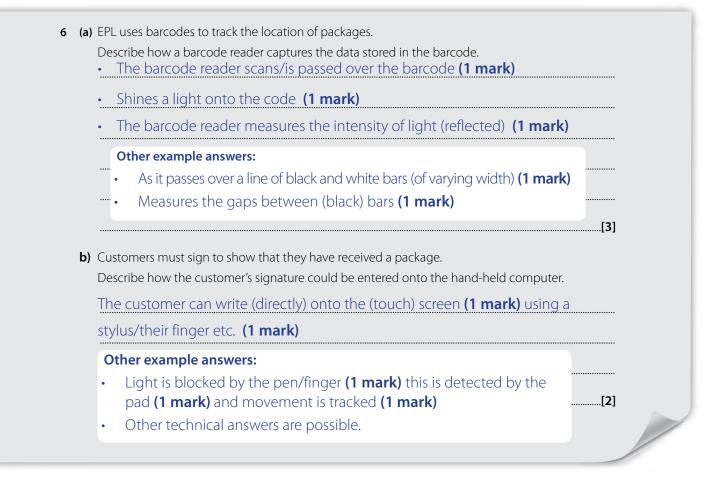
Up to **two** marks for a matched answer.

Do not accept quicker/faster on its own eg SSD is faster than hard disk drive. Accept reasons for NOT using hard disk drive.

Examiner comments

Few candidates were aware of the reasons why a solid state drive was appropriate.

Question 6 (a) and (b)



Mark Scheme Guidance

6 (a) Accept 'reads'.

Examiner comments

Very few candidates were able to give clear answers about how satellites are used as part of a GPS, with slightly more able to describe how a barcode reader captures the data in a barcode.

Part b of the question, however, provided candidates with something of a respite and many were able to give good answers that identified the use of a touch pad and a stylus.

Some candidates missed the point here and stated that the signature could be written down and then scanned, whilst one candidate clearly understood the focus of the question, but lacked the technical knowledge and wrote that the signature could be captured by using a "thing like the postman has".

Question 6 (c)

EPL receives information from the hand-held computers to track the location Describe how the Global Positioning System (GPS) locates the position of an in Works with satellites (1 mark)	<i>,</i>
Receives/detects signals (1 mark)	
The time taken (for the signal) to reach the device is calculated	(1 mark)
Other example answers:	
• The time taken to reach the device is compared to the location from where the signal was sent (1 mark)	
Requires uninterrupted line of sight (1 mark)	[3]
Requires a minimum of four satellites (1 mark)	

Mark Scheme Guidance

Answer must give a technical description of the process, rather than a general description of how EPL can use GPS to find a driver. Do not accept receiver transmits signals to the satellites.

Examiner comments

Very few candidates were able to give clear answers about how satellites are used as part of a GPS, with slightly more able to describe how a barcode reader captures the data in a barcode.

Question 7

7	EPL has considered attaching a Radio Frequency Identification Device (RFID) tag to each package it is delivering to help improve its traceability.
	(a) Describe how RFID technology would track the movement of packages EPL are delivering. RFID tag placed on a parcel (1 mark)
	RFID tags transmit a unique signal (1 mark)
	This signal is unique (1 mark)
	Other example answers:
	These are picked up by receiver (1 mark)
	Packages can be located (1 mark) RFID
	[3]
	(b) Explain how cost would influence the decision about whether to adopt RFID technology.
	If the technology/reader is too expensive (1 mark) then it will not be introduced (1 mark)
	Other example answers:
	Lots of tags are needed (1 mark) which is too expensive (1 mark)[2]
	Lost products cost the EPL money (1 mark) RFID tags reduce the chance of loss (1 mark)

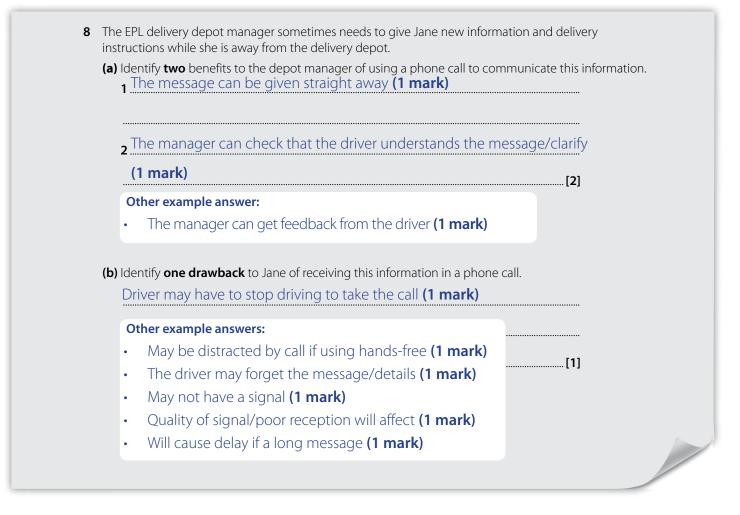
Examiner comments

Part a was the final technical part of the paper. However, the mark scheme for this question was slightly wider and allowed for more general answers. Candidates were, for example, awarded the mark if they showed awareness that 'a signal would be sent out'.

In some cases, candidates did not seem to appreciate the difference between RFID and GPS systems and answered the question with reference to satellites.

The mark scheme for Part b of this question was also quite wide and, as long as candidates showed some awareness that if the cost was significant, the purchase would not go ahead, or that the cost would be justified if it was less than any benefit, marks were awarded.

Question 8 (a) and (b)



Mark Scheme Guidance

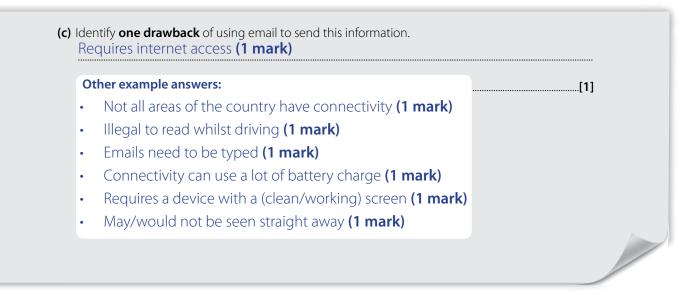
- (a) Award one mark for each of two valid benefits to the depot manager.Do not accept 'quicker' on its own. Mark as too vague.
- (b) Do not accept answer relating to cost.Award one mark for a valid drawback to the delivery driver.Do not accept answer relating to cost.

Examiner comments

The focus of this question was on the ability of a driver to communicate with their main depot. Candidates were well able to cope with all aspects of this question, although few gave answers which were worth full marks for part a. Typically, candidates were able to identify issues such as the fact that a telephone could be used to give a two way message, and therefore Jane could clarify any lack of understanding on her part.

For part b, candidates in general showed a good awareness of the possible drawbacks of using a telephone to convey information, with some concentrating on the issue of signal failure whilst others considered issues to do with Jane accessing the call whilst driving. However, as with other questions, some candidates suggested drawbacks which were not relevant to Jane and so were not awarded marks.

Question 8 (c)



Mark Scheme Guidance

Do not accept 'need a computer'.

Examiner comments

Of the three sub-questions within question 8, question 8 (c) was dealt with most successfully. Candidates gave a range of suitable answers. However, of those who failed to give suitable answers, most suggested that one drawback of receiving the information by email would be that a computer was required. As the fact that Jane had a smart phone was established in the scenario, this answer was incorrect.

Question 9 (a)

	Subject: EPL Customer Services. Prize winner!		
	Hello!		
	The courier company has awarded 2u a special prize for being an outstanding customer!		
	Your prize is 650 million United States Dollars (USD).		
	Please attention! To collect your prize you must give us your bank details. Please download and open the attached form to add your bank details. Then send it to elpprize@czgt.com.		
(a) Io	dentify four reasons why this email is suspicious.		
	1 Poor spelling/example of poor spelling, such as 2U (1 mark)		
	- Poor grammar/ovample of poor grammar such as Ploase attention. (1	mark)	
	² Poor grammar/example of poor grammar, such as Please attention! (1	mark)	
	² Poor grammar/example of poor grammar, such as Please attention! (1	mark)	
	² Poor grammar/example of poor grammar, such as Please attention! (1 3 Large prize/mention of \$650million as the prize (1 mark)	mark)	
		mark)	
		mark)	
	₃ Large prize/mention of \$650million as the prize (1 mark)	<u>mark</u>)	
	³ Large prize/mention of \$650million as the prize (1 mark) ⁴ Request for bank details (1 mark)		
	³ Large prize/mention of \$650million as the prize (1 mark) ⁴ Request for bank details (1 mark) ther example answers:		
	³ Large prize/mention of \$650million as the prize (1 mark) ⁴ Request for bank details (1 mark) ther example answers: Request to download/open an attachment (1 mark) Misspelling in email address/example of misspelling of email		

Mark Scheme Guidance

Award one mark for each of four valid reasons.

Examiner comments

The answers to this question showed a good awareness of the issues of phishing and e-safety in general. Many candidates achieved full marks. However, amongst this success, it is worth reminding candidates that they need precision in their answers. For example, the email address elpprize@czgt.com did not 'look dodgy', but rather was of a form that would not be expected for a company called EPL.

Question 9 (b)



Mark Scheme Guidance

Accept any appropriate **action** in response to a suspicious email. Do not accept 'inform EPL/the business'. Do not accept "report it". Mark as too vague.

Examiner comments

For part b of the question, the mark scheme allowed a wide range of possible answers. Of those seen, the most frequent was to 'contact the police', but a similar number of candidates correctly suggested that the receiver should not do anything. A small number of candidates missed the direction given in the question itself and suggested that a suitable response would be to contact EPL.

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