



Cambridge National

ICT

Level 1

Unit **R001/01**: Understanding Computer Systems

Mark Scheme for June 2013

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This mark scheme is published as an aid to teachers and students, to indicate the requirements of the examination. It shows the basis on which marks were awarded by examiners. It does not indicate the details of the discussions which took place at an examiners' meeting before marking commenced.

All examiners are instructed that alternative correct answers and unexpected approaches in candidates' scripts must be given marks that fairly reflect the relevant knowledge and skills demonstrated.

Mark schemes should be read in conjunction with the published question papers and the report on the examination.

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1. Annotations

1		1091 +		Good response/positive
2		1181 +		Positive
3		1171 -		Negative
4		281 ?		Unclear
5		31	BOD Benefit	of doubt
6		21	Cross Cross	
7		991 FA		First answer
8		41 FT		Follow through
9		1811	FTX	Follow through wrong
10		501	NAQ	Not answered question
11		191	NBOD	Benefit of doubt not given
12		521 NGE		Not good enough
13		201	TV Too	vague
14		11	Tick Tick	

Section A

Question Answer		er	Marks	Guidance
1 (a)		<p>ONE from</p> <p>eg</p> <ul style="list-style-type: none"> • Mouse • Keyboard • Microphone • Touch screen. 	1	Accept any answer that could be used to input text.
(b)		<p>TWO marks for a matched answer</p> <p>eg</p> <ul style="list-style-type: none"> • So that system knows who each person is (1) and they won't be confused with others/so delivery goes to the correct person (1) • To enable the system to identify each user (1) and to enable it to match the username to the account's password (1). 	2	One mark for each of two valid points.
(c)		<p>TWO from</p> <ul style="list-style-type: none"> • Require John to select from a drop down list (or equivalent) (1) and set the form to only accept answers from that list/not allow any other answers (1). 	2	<p>One mark for each of two valid points.</p> <p>Equivalent answers to a drop-down would include:</p> <ul style="list-style-type: none"> • List of options • Scroll menu <p>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").</p>

2 (a)	Printer.	1	
(b)	<p>TWO marks for a matched answer</p> <p>Three from eg</p> <ul style="list-style-type: none"> • Fields (1) to store each category of information (1) • Records (1) to enable each customer's information to be stored (1) • Key field (1) to ensure each customer record can be identified (1) • Tables (1) to store sets of related information eg contact details, order history/ that are linked (1) • Queries/searches (1) enable information in tables to be interrogated (1) • Reports (1) to produce visual displays of queries (1) • Switchboard (1) to enable access to the main parts of a database (1) • Forms (1) to enter data (1) • Sort (1) so that data can be put in order (candidate may specify an order or a reason) (1) • Easy to edit (1) so records can be updated (1). 	6	<p>Award one mark for each of three features. Award one mark for a description of each feature.</p> <p>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.</p> <p>Answers must relate to database software not database facilities of other types of software.</p>

Question Answer		Marks	Guidance
			Levels of response
3	<p>Implications may be negative or positive.</p> <p>Impact areas</p> <p>eg</p> <ul style="list-style-type: none"> • Legal implications (eg possible action from owners of copyright) • Security implications (eg need for secure systems/increased security) • Impact on organisation (eg costs of setting up systems and resolving problems caused by inappropriate use) • Commercial implications (eg it could increase interest in the business and sales of its products) • Means of communication (not advertising). 	9	<p>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.</p> <p>Subject specific terminology is used accurately and appropriately.</p> <p>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.</p> <p>Some subject specific terminology is used.</p> <p>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.</p> <p>(0 marks) Answer not worthy of credit.</p>

Question Answer	er	Marks	Guidance
4 (a)	<p>Candidate may describe the general process or give a more specific answer</p> <p>General answer</p> <p>eg</p> <ul style="list-style-type: none"> • Email (1) as an attachment/as a body of text/which will then be opened/downloaded by Clare/saved to Claire's computer (1) • Upload the article to a file-sharing service eg cloud (accept named example) (1) which is synchronised with a folder on Clare's computer/from where Claire gets it (1) • Copy the article to a location (eg intranet/file hosting service) (1) that only he and Clare have access to (1) and Claire could download the files herself (1). <p>Specific process</p> <p>eg</p> <ul style="list-style-type: none"> • Open email software (1) <u>click on paperclip (or equivalent)/attach file /write the email</u> (1) click send (1). 	2	<p>One mark for a valid method plus one mark for a correct description.</p> <p>The underlined section is required for two marks if the specific process is described.</p>
(b)	<p>ONE from</p> <ul style="list-style-type: none"> • Encrypt • Password protect the file • Restrict access to folder. 	1	<p>Question asks for measures to prevent unauthorised reading, not unauthorised editing, so do not accept responses such as 'make document <i>read only</i>'.</p>

Question Answer	er	Marks	Guidance												
(c)	<p>TWO from</p> <p>eg</p> <ul style="list-style-type: none"> • Tracked changes (1) which shows any changes that Clare has made (1) • Add comments (1) by clicking on the comments tool/which are callouts (which include comments)/which go in coloured boxes on the side of the page (1) • Emphasised text (or example) (1) by clicking the coloured pencil/bold (or equivalent) (1) • Ink tools/layer (or equivalent) (1) to annotate text (1). 	4	<p>Answer must be a method by which feedback about content or focus of the article may be given.</p> <p>Do not accept 'write on it'. Mark as too vague as answer is not clearly using a feature of WP.</p> <p>Do not allow to provide feedback.</p>												
(d)	<table border="1"> <thead> <tr> <th>Requirement</th> <th>Device</th> </tr> </thead> <tbody> <tr> <td>Voice input</td> <td>microphone</td> </tr> <tr> <td>Moving image input</td> <td>webcam/video camera/camera</td> </tr> <tr> <td>Voice output</td> <td>speakers/headphones</td> </tr> <tr> <td>Moving image output</td> <td>monitor/screen/VDU/TV</td> </tr> <tr> <td>Connectivity</td> <td>modem/router/cable/network card</td> </tr> </tbody> </table>	Requirement	Device	Voice input	microphone	Moving image input	webcam/video camera/camera	Voice output	speakers/headphones	Moving image output	monitor/screen/VDU/TV	Connectivity	modem/router/cable/network card	5	<p>Award one mark for each valid device.</p> <p>Accept valid variants on these terms (eg mobile broadband dongle for connectivity).</p> <p>Wireless is not accepted on its own, but accept when with modem etc.</p> <p>Answer requires a device. Internet/wi-fi, for example, are not answers for 'connectivity'.</p>
Requirement	Device														
Voice input	microphone														
Moving image input	webcam/video camera/camera														
Voice output	speakers/headphones														
Moving image output	monitor/screen/VDU/TV														
Connectivity	modem/router/cable/network card														

Section B

Question Answer		er	Marks	Guidance
5 (a)		<p>ONE from</p> <p>eg</p> <ul style="list-style-type: none"> • USB (1) • Firewire (1) • Ethernet (1). 	1	Do not accept cable/network cable on its own.
(b)		<p>Up to TWO marks for a matched answer</p> <p>eg</p> <ul style="list-style-type: none"> • The security key is checked (1) to see if it is on a list (1) <u>if on a list</u>, access is granted (1) • It is like a password (1) which is checked by the system (1) and access is granted <u>if found</u> (1) • The user types in the security key (1) and the device will connect to the network <u>if the key is correct</u> (1). 	2	
(c)		<p>Up to TWO marks for a matched answer</p> <p>eg</p> <ul style="list-style-type: none"> • Solid state drives (SSD) contain no moving parts (such as a read/write head and a rotating disk on a hard disk drive) (1) so they are less likely to be damaged if dropped (1) • Seeks data quickly (1) therefore quicker response (1) • More reliable (1) as less likely to be damaged (1) • Smaller (1) means will fit into a mobile device/the mobile device itself can be smaller (1) • Lighter (1) so suitable for a mobile device (1) • Uses less power (1) so extends battery life (1). 	2	<p>Do not accept quicker/faster on its own eg SSD is faster than hard disk drive.</p> <p>Accept reasons for NOT using hard disk drive</p>

Question Answer		Mark Scheme	Marks	Guidance
6 (a)	<p>Up to THREE from</p> <p>eg</p> <ul style="list-style-type: none"> • The barcode reader scans/ is passed over the barcode (1) • Shines a light onto the code (1) • The barcode reader measures the intensity of light (reflected) (1) • As it passes over a line of black and white bars (of varying width) (1) • Measures the gaps between (black) bars (1) • Converts this data into a code (1). 		3	Accept 'reads'
(b)	<p>TWO marks available for a matched answer</p> <p>Eg</p> <ul style="list-style-type: none"> • The customer can write (directly) onto the (touch) screen (1) using a stylus/their finger etc (1) • Light is blocked by the pen/finger(1) this is detected by the pad (1) and movement is tracked (1). <p>Other technical answers are possible.</p>	2		
(c)	<p>Up to THREE marks available</p> <p>eg</p> <ul style="list-style-type: none"> • Works with satellites (1) • Receives/detects signals (1) • The time taken (for the signal) to reach the device is calculated (1) • The time taken to reach the device is compared to the location from where the signal was sent (1) • Requires uninterrupted line of sight (1) • Requires a minimum of four satellites (1). 	3	<p>Answer must give a technical description of the process, rather than a general description of how EPL can use GPS to find a driver.</p> <p>Do not accept receiver transmits signals to the satellites.</p>	

Question Answer	er	Marks	Guidance
7 (a)	<p>Up to THREE marks available</p> <p>eg</p> <ul style="list-style-type: none"> • RFID tag placed on a parcel (1) • RFID tags transmit a unique signal (1) • This signal is unique (1) • These are picked up by receiver (1) • Packages can be located (1). 	3	
(b)	<p>Up to TWO marks available for a matched answer</p> <p>eg</p> <ul style="list-style-type: none"> • If the technology/reader is too expensive(1) then it will not be introduced (1) • Lots of tags are needed (1) which is too expensive (1) • Lost products cost the EPL money (1) RFID tags reduce the chance of loss (1) • EPL will weigh up the cost against the benefit (1). If this is positive, they will buy (1). 	2	
8 (a)	<p>TWO marks available</p> <p>eg</p> <ul style="list-style-type: none"> • The message can be given straight away (1) • The manager can check that the driver understands the message/clarify (1) • The manager can get feedback from the driver (1). 	2	<p>Award one mark for each of two valid benefits to the depot manager.</p> <p>Do not accept “quicker” on its own. Mark as Too Vague.</p> <p>Do not accept answer relating to cost.</p>

(b)	<p>ONE mark available</p> <p>eg</p> <ul style="list-style-type: none"> • Driver may have to stop driving to take the call (1) • May be distracted by call if using hands-free (1) • The driver may forget the message/details (1) • May not have a signal(1) • Quality of signal/poor reception will affect (1) • Will cause delay if a long message(1). 	1	<p>Award one mark for a valid drawback to the delivery driver.</p> <p>Do not accept answer relating to cost.</p>
(c)	<p>ONE from</p> <p>eg</p> <ul style="list-style-type: none"> • Requires internet access (1) • Not all areas of the country have connectivity (1) • Illegal to read whilst driving (1) • Email needs to be typed (1) • Connectivity can use a lot of battery charge (1) • Requires a device with a (clean/working) screen (1) • May/would not be seen straight away (1). 	1	<p>Do not accept 'need a computer'.</p>

9 (a)	<p>Up to FOUR marks available</p> <p>eg</p> <ul style="list-style-type: none"> • Poor spelling/ example of poor spelling, such as 2U (1) • Poor grammar/example of poor grammar, such as Please attention! (1) • Large prize/ mention of \$650million as the prize (1) • Request for bank details (1) • Request to download/open an attachment (1) • Misspelling in email address/example of misspelling of email address, such as elp not EPL (1) • Unusual email address/example of unusual email address such as @czgt.com (1) • No name on the letter (1). 	4	Award one mark for each of four valid reasons.
(b)	<p>ONE mark available:</p> <p>eg</p> <ul style="list-style-type: none"> • Delete email (1) • Do not act on contents (1) • Do not open the attachment (1) • Contact/inform bank (1) • Mark as spam (1) • Report to actionfraud.co.uk/police (1). 	1	<p>Accept any appropriate action in response to a suspicious email.</p> <p>Do not accept 'inform EPL/the business'.</p> <p>Do not accept "report it". Mark as too vague,</p>

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