



## **Cambridge National ICT**

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

Cambridge National Level 1/2 Certificate

**Mark Scheme for January 2015**

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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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These are the annotations, (including abbreviations), including those used in scoris, which are used when marking

1	<b>BOD</b>	BOD	Benefit of doubt
2	<b>X</b>	Cross	Cross/Incorrect
3	<b>REP</b>	REP_BIG	Repetition
4	<b>SEEN</b>	SEEN	Noted but no credit given
5	<b>✓</b>	Tick	Tick
6	<b>TV</b>	TV	Too vague
7	NBOD	NBOD	Benefit of doubt not given
8	FT	FT	Follow though
9	FA	FA	First Answer
10	NAQ	NAQ	Not answered question
11	FTX	FTX	Follow through wrong
12	L1		Level 1
13	L2		Level 2
14	L3		Level 3

## MARK SCHEME

Question		Answer/Indicative content	Mark	Guidance																
1	a	<p>One mark per correct answer</p> <table border="1"> <thead> <tr> <th>Purpose</th> <th>Item</th> </tr> </thead> <tbody> <tr> <td><i>To move the pointer around the screen and select items on a list or menu</i></td> <td><b>D</b></td> </tr> <tr> <td>To capture data held on a debit or credit card</td> <td><b>A</b></td> </tr> <tr> <td>To capture sound</td> <td><b>C</b></td> </tr> <tr> <td>To enter characters onto a computer system</td> <td><b>B</b></td> </tr> <tr> <td>To make electronic copies of paper documents</td> <td><b>E</b></td> </tr> <tr> <td>To measure physical variables such as light in a room</td> <td><b>F</b></td> </tr> <tr> <td>To move the pointer by following movements of the user's fingers</td> <td><b>G</b></td> </tr> </tbody> </table>	Purpose	Item	<i>To move the pointer around the screen and select items on a list or menu</i>	<b>D</b>	To capture data held on a debit or credit card	<b>A</b>	To capture sound	<b>C</b>	To enter characters onto a computer system	<b>B</b>	To make electronic copies of paper documents	<b>E</b>	To measure physical variables such as light in a room	<b>F</b>	To move the pointer by following movements of the user's fingers	<b>G</b>	6	<p>Answer D was given as an example to candidates.</p> <p>No marks (per answer) if:</p> <ul style="list-style-type: none"> <li>• Candidate gives two letters in same cell (regardless of order in which given).</li> <li>• Answer is not given within the relevant row of the table.</li> </ul>
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	b	<p>Up to TWO from:</p> <p>eg</p> <ul style="list-style-type: none"> <li>• Small/fits in a bag (1)</li> <li>• Light (weight) (1)</li> <li>• Portable (1)</li> <li>• Devices are integrated (rather than separate) (1)</li> <li>• Battery powered/battery or mains powered (1)</li> </ul>	2	<p>Do not accept general statements of features, such as "size" or "weight" without some indication of value, such as "light weight."</p> <p>Answer must be features not functions and not devices (the mark is for the fact that they are integrated).</p> <p>Do not accept answers to do with cost or efficiency.</p> <p>Answers should be features which are not true of a desktop computer. Wireless connectivity would not be correct – wireless connectivity in customer's home would be acceptable under portable.</p>																

2	a	Up to TWO marks:  SMIT (1) 0010 (1)	2	SMIT may be lower case or mixture of upper and lower.  Order of sections may be reversed and maybe may be separated by punctuation such as hyphen, underscore or full stop.  0010 must be stated in full.
	b	i Up to THREE marks: <ul style="list-style-type: none"><li>• Many people have the same first letters in their surname (1) such as Manson and Mansfield (1) and so ... (3<sup>rd</sup> mark)</li><li>• Many people will have the same surname (1) such as Jones (1) and so ... (3<sup>rd</sup> mark) 3<sup>rd</sup> mark</li><li>• The numbers will also be the same/and the numbers are based on order/every photo shoot has a first and second photograph (1)</li></ul>	3	Award a maximum of ONE mark for any suitable example. One mark to do with name/letters. One for numbers. One mark for example.  Alternative interpretation:  Some people have names with less than 4 letters (1) eg Woo (1) so the system could not create a code (1)
	b	ii Up to TWO marks: eg <ul style="list-style-type: none"><li>• Photos will be confused/have the same name (1) and so people will get the wrong photo/the wrong photo will be selected/harder to find (1)</li><li>• People will be sent the wrong photo (1) and take business elsewhere (1)</li></ul>	2	Answers must be focussed on the potential for confusion caused by the possibility that two photographs for different customers could have the same reference.  Problem must either be a problem for Image Reflections (including violation of DPA) or for a customer who receives the wrong image (can accept implications of not receiving the correct image).

3	a	<p>Up to THREE marks:</p> <p>eg</p> <ul style="list-style-type: none"> <li>Cookie checks where you have been (1) on that site (1) finds what you like (1) and shows you suitable content (1)</li> <li>The cookie identifies who you are (1) so that when you go back to the website (1) information is shown that is based on what you looked at before (1)</li> <li>A piece of unique text/information is stored on your hard drive/computer (1) by a webserver (1) this then identifies you when you log on again (1) and so you get material that suits you (1)</li> </ul>	3	<p>Max 2 for answers that do not include the fact that the cookie identifies the customer.</p> <p>Do not accept any reference to a cookie being a program</p> <p>Do not accept answers that say cookies gather data</p> <p>Do not accept a repeat of the question e.g. "used to select the advertisements" equals zero, but "used to select the advertisements <b>that show similar products</b>" is one mark</p> <p><b>Candidates may answer the question by giving three individual points, or may write one extended answer, or a mixture of both extremes. Any of these three structures is acceptable.</b></p>
b		<p>Up to TWO marks:</p> <p>eg</p> <ul style="list-style-type: none"> <li>Because the (EU) e-Privacy directive / EU / EU cookie law (1) says you have to warn visitors (1)</li> <li>You need permission to store the data (1) on the user's computer (1)</li> <li>It is a legal requirement/DPA (1) if you do not do it they will be investigated by the ICO (1) and potentially fined (1)</li> <li>Some people do not want their private data stored (1) so are given the option to opt out (1)</li> </ul>	2	<p>This question must be answered as a response caused by a legal requirement.</p> <p>One mark for identifying issue/reason (1). Second answer for expansion/reason (1)</p> <p>Answer may not refer to legal.</p>

4		<p>Up to SIX marks: eg</p> <ul style="list-style-type: none"> <li>• The font size is too small (1) making it hard to read (or equivalent issue)(1)</li> <li>• There are no instructions (1) so it is not clear how to use the page/ customers may not know what is required for each answer(1)</li> <li>• Male and female are option boxes (1) (so user) can select both (1) (candidate may answer in terms of not using radio buttons)</li> <li>• Overlapping lists (1) so that it is not clear which to choose (if you are 22 etc) (1)</li> <li>• Customer may be under 16 (1) so they don't know where to tick (1)</li> <li>• Only 5 slots for date (1) most dates use 6 slots/ will not be able to enter date (1)</li> <li>• Small space for feedback (1) restricts the amount the user writes/means/user cannot see what has been written/user might want to write more (1)</li> <li>• No submit button (1) so no means of user to send in the completed form (1)</li> <li>• Male/female boxes are not correctly aligned (1) so it is not clear that they are alternatives (1)</li> </ul>	6	<p>First mark for identifying problem, second mark for explaining why it is a problem. DO NOT award full marks unless problem is clearly stated.</p> <p>Maximum TWO marks per set of answers.</p> <p>Only award “so data is inaccurate (or equivalent)” or “lack of instructions” once.</p> <p>As online form, size of handwriting is irrelevant.</p> <p><b>Only award answers that are for the form provided. Where answer identifies something that is missing, and which has not been already identified in the mark scheme, this is only acceptable if the answer is clearly within context and makes the form hard to use (a lack of a logo, for example, would not be acceptable).</b></p>
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Question		Answer/Indicative content	Marks	Guidance	
				Content	Levels of response
5		<p>Candidate may consider:</p> <p>Both</p> <ul style="list-style-type: none"> <li>• Staff perception</li> <li>• Software available</li> <li>• Functionality</li> </ul> <p>Positive</p> <ul style="list-style-type: none"> <li>• Efficiency</li> <li>• Desk space</li> <li>• Flexibility of office design</li> <li>• Portability – Both in and out of the office</li> <li>• Company image</li> </ul> <p>Negative</p> <ul style="list-style-type: none"> <li>• Cost of purchase</li> <li>• Staff may require training</li> <li>• Supply problems – Not all tablets can bought at once</li> <li>• Compatibility between systems</li> <li>• Staff who do not receive the new tablets may feel under-valued</li> <li>• Ease of theft</li> <li>• Ease of damage</li> <li>• Ergonomic issues</li> <li>• Inability to centralise control</li> </ul> <p>.</p>	<p>7 – 8</p> <p>4 – 6</p>	<p>An explanation will include a clear indication of why it is an issue for Image Reflections.</p> <p><b>Explain example</b> There is a security issue because laptops are portable and may therefore be stolen more easily, costing the company money. <b>This answer is a description and clear explanation of why it is important.</b></p> <p><b>Describe example</b> There is a security issue because laptops are more portable and more easy to steal. <b>This is a good description.</b></p> <p><b>List example</b> Laptops are portable. <b>This answer is part of a list of factors.</b></p>	<p><b>LEVEL Three (7–8 marks)</b></p> <p>For the top of the band, candidates will describe three factors with a clear explanation of why each is important. Answer, as a whole, must consider BOTH the decision for and the decision against.</p> <p>All answers must be in context.</p> <p>Specialist terms will be used correctly and appropriately.</p> <p><b>Level 2 (4–6 marks)</b></p> <p>For the top of the band: candidates will describe ONE factor with a clear explanation of why it is important.</p> <p>OR</p> <p>candidates will provide a good description of at least THREE factors. Each factor will be described with no indication of why it is important. Need not have covered both sides of the argument.</p> <p>At the bottom of the mark band, candidates will provide a good description of ONE factor, which may not be in context.</p> <p>(eg <i>Candidates will give a</i></p>

Question		Answer/Indicative content	Marks	Guidance	
				Content	Levels of response
			<p>1 – 3</p> <p>0</p>	<p><i>description of the impact of three factors, cost, training, ease of theft)</i></p> <p>Specialist terms will be used appropriately and for the most part correctly.</p> <p><b>Level 1 (1–3 marks)</b> The answer may be a list of factors or a weak description of one factor.</p> <p>There will be no use of specialist terms.</p> <p>At the bottom end, simply identifying one factor is worth 1 mark.</p> <p><b>Zero marks</b> Answers with no valid content.</p>	

<b>SECTION B</b>				
6	a	<p>ONE from:</p> <p>eg</p> <ul style="list-style-type: none"> <li>• Attendees (1)</li> <li>• Subject of meeting (1)</li> <li>• Location (1)</li> <li>• Agenda (1)</li> <li>• Time (either start time or end time) (1)</li> </ul>	1	<p>Do not accept date or duration as given in the question</p> <p>Do not accept attachments unless the candidate specifically identifies the attachment as including information about the meeting – such as an agenda.</p> <p>Accept any sensible form of information that could be stored about appointments or the subject or purpose of the appointment.</p>
	b	<p>Up to TWO marks</p> <p>eg</p> <ul style="list-style-type: none"> <li>• Sean will look (1) and see that he already has a meeting (1)</li> <li>• Sean will be able to see that he has a booking (1) during the slot when he is trying to book the second meeting (1)</li> <li>• The software will warn him (1) if he has another meeting at the same time (1)</li> <li>• Because the bookings can be synced (1) over multiple devices (1)</li> </ul>	2	<p>Some answers may be close to the wording of the question, but are acceptable as long as not exactly the same.</p>
	c	<p>Up to TWO marks:</p> <p>eg</p> <ul style="list-style-type: none"> <li>• Colour coding/blocks/have different colours (1) for different types of meetings/categorising (1)</li> <li>• Text labels (1) which state what the meeting is for (1)</li> <li>• Two separate calendars (1) one for each type of meeting (1)</li> </ul>	2	<p>Must be a feature of Diary Management software</p>

d	<p>Up to three marks for a fully explained use of ONE feature:</p> <p>eg</p> <ul style="list-style-type: none"> <li>• To do lists/tasks (1) <ul style="list-style-type: none"> <li>◦ It would remind him of what he has to do (1) and so he will be less likely to forget them (1)</li> <li>◦ He can create a hierarchy/ordered list (1) so that he knows what order to do things in (1)</li> </ul> </li> <li>• Email (1) <ul style="list-style-type: none"> <li>◦ He can send messages to customers (1) to confirm bookings/advise them of progress (1)</li> <li>◦ Software can combine email from different addresses (1) so that all emails are in one log on (1)</li> </ul> </li> <li>• Contacts information/lists (1) <ul style="list-style-type: none"> <li>◦ Can store address (or equivalent) (1) for future reference/use (1) (Candidate may describe a situation where this occurs).</li> </ul> </li> <li>• Reminders/alerts (1) <ul style="list-style-type: none"> <li>◦ So he can be reminded of appointments (1) so he is less likely to miss them (1)</li> </ul> </li> <li>• Share calendars (1) <ul style="list-style-type: none"> <li>◦ People can see when he is free (1) and make appointments in those slots (1)</li> </ul> </li> </ul>	3	<p>Award any sensible features that fit the scenario</p> <p><b>The first mark is for identifying the feature.</b> The second and third may be awarded for one developed benefit, or may be awarded for identifying two individual benefits.</p> <p>Where candidate has not stated a feature, benefit marks may be awarded where the feature is clearly inferred.</p> <p>Must be work related.</p>
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7	a	<p>Up to TWO from: eg</p> <ul style="list-style-type: none"> <li>• Wi-Fi/wireless/3g/4g (1)</li> <li>• Bluetooth (1)</li> <li>• USB (1)</li> <li>• Wired method (accept examples) (1)</li> <li>• SD card/memory card (1)</li> <li>• Upload to cloud/named commercial equivalent (1)</li> <li>• Email (1)</li> </ul>	2	<p>Do not accept “transfer across the network”</p> <p>Do not accept transfer on its own – answer must identify a method by which this can be achieved.</p> <p>Examples of wired method would include a description of attaching camera to computer via a cable for example.</p>
	b	<p>Up to TWO marks for each description: eg</p> <p><b>Crop</b></p> <ul style="list-style-type: none"> <li>• Remove information (1) and benefit (1)</li> <li>• This can remove parts (1) that are not wanted (1) such as (a suitable example) (1)</li> <li>• This can create a new focus for the photograph (1) using part of the old one (1)</li> <li>• Makes the image smaller (1) so it is the correct size (1)</li> </ul> <p><b>Rotate</b></p> <ul style="list-style-type: none"> <li>• Change presentation angle (1) and benefit (1)</li> <li>• Original image may not be correct orientation (or example) (1) and so image needs to be turned to make it suitable (or example) (1)</li> </ul> <p><b>Zoom</b></p> <ul style="list-style-type: none"> <li>• Get a closer view (1) and benefit (1)</li> <li>• Brings the graphic into close up (1) so that editing is easier/more detail can be seen (1)</li> </ul>	6	<p>In each case, only award the second mark if the expansion is clearly in context of the question.</p> <p>Only award second mark for zoom if the benefit is linked to editing.</p>
	c	<p>ONE from</p> <ul style="list-style-type: none"> <li>• Specific software to access/open the file (1)</li> <li>• A type of file linked to a piece of software (1)</li> <li>• A file type owned by one business/company/individual (1)</li> <li>• Use of file type restricted (1)</li> </ul>	1	Do not accept examples on their own.

	d	<p>Up to TWO marks for a full description:</p> <p>eg</p> <ul style="list-style-type: none"> <li>• Open format is not linked to a piece of software (1) and so more users can open the file (1)</li> <li>• The file needs to be opened by staff at the head office (1) who do not have the same software as Sean (1)</li> <li>• Open format can be used by a number of software applications (1) so can be opened even if don't have same software (1)</li> <li>• Proprietary format can only be opened with the linked software (1), so if you don't have it, you cannot open the file (1)</li> </ul>	2	<p>Award TWO marks for ONE developed answer <b>OR</b> TWO individual reasons</p>
8	a	<p>Two marks for a full description:</p> <p>eg</p> <ul style="list-style-type: none"> <li>• Transfer may include a virus/Trojan/spyware (1) that gathers information from the server (1)</li> </ul>	2	<p>Answer <b>MUST</b> refer to a threat caused by the actual transfer of data from one computer to another.</p> <p>Accept answers about:</p> <ul style="list-style-type: none"> <li>• Interception of file/hacking of file</li> <li>• corruption of the file</li> <li>• sending to the wrong address</li> </ul> <p>Do not accept lost.</p>
	b	<p>Read the whole answer and mark to the candidate's best advantage.</p> <p>eg</p> <ul style="list-style-type: none"> <li>• Is software or hardware (1)</li> <li>• Monitors ports (1)</li> <li>• Inspects data packets (1)</li> <li>• Uses pre-set rules (1)</li> <li>• Identifies data that breaks rules/identifies viruses (1)</li> <li>• Restricts data in (1)</li> <li>• Restricts data out (1)</li> <li>• To/from certain (unapproved external) locations (1)</li> <li>• Alerts/warning (1)</li> </ul>	3	<p>MAX 1 mark if candidate only describes a firewall or a server.</p> <p><b>There is a number of key points that can be made. Read the whole answer and award each valid point, to a maximum of three.</b></p>

9		Up to TWO marks for a full description:  eg <ul style="list-style-type: none"><li>• A water mark/label can be added (1) such as a company/photographer name/copyright symbol (1) put on the photograph (1)</li><li>• Make it a low resolution image (1) so that it lacks detail/is low quality (1).</li></ul>	2	Answer must refer to a method of formatting the photograph.  For 2 marks, must identify the method and then describe the method NOT the impact.
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**OCR (Oxford Cambridge and RSA Examinations)**  
1 Hills Road  
Cambridge  
CB1 2EU

**OCR Customer Contact Centre**

**Education and Learning**  
Telephone: 01223 553998  
Facsimile: 01223 552627  
Email: [general.qualifications@ocr.org.uk](mailto:general.qualifications@ocr.org.uk)

[www.ocr.org.uk](http://www.ocr.org.uk)

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Head office  
Telephone: 01223 552552  
Facsimile: 01223 552553

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