

GCSE

ICT

Unit **B061**: ICT in Today's World

General Certificate of Secondary Education

Mark Scheme for June 2014

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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.

OCR will not enter into any discussion or correspondence in connection with this mark scheme.

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1. Annotations

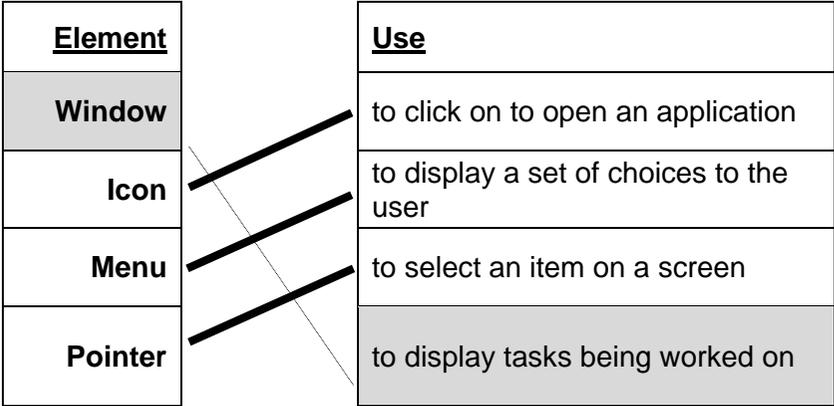
Annotation	Meaning
	Blank Page – this annotation MUST be used on all blank pages within an answer booklet (structured or unstructured) and on each page of an additional object where there is no candidate response.
	Seen: this annotation must be used on all responses that are NR (no response) and on Level of Response questions.
	Tick : this annotation MUST be used to indicate where credit has been given in a response. NB the number of ticks shown on a response must equal the mark awarded unless clearly stated to the contrary below in Section 11.
	Cross : this annotation is used to indicate where a response is clearly wrong/incorrect or not awarded credit.
Other available annotations:	The annotations toolbar has other available annotations which may be used: TV, BOD and NBOD, Caret (to e.g. indicate that the candidate has omitted a required part of the response), Highlight, REP, NAQ, ?, ^, and the line overlay. These should be used sparingly or as directed by Team Leaders/Supervisors.

2. Subject-specific Marking Instructions

Every page and every response, on all scripts, must have an annotation to show that it has been seen and read by the marker.

There must be **NO** ticks or crosses or other annotation, with the exception of **SEEN**, on responses marked with Level of Response mark schemes.

MARK SCHEME

Question	Answer	Mark	Guidance
1	<p>Links as shown:</p> 	3	<p>Use the overlay tool in SCORIS when marking.</p> <p>Note that Window + to display etc is given in the question.</p>
2 (a)	<p>Two descriptions from, max 2 marks per description, from eg:</p> <ul style="list-style-type: none"> • goods/customers pass through checkout quicker (1) and there is reduction in queues at checkouts (1) and more sales are made (1) with an increase in profits/turnover (1) • data capture is more accurate(1) and there is a reduction in errors due to manual data entries at checkout (1) • data retrieval is automatic (1) and product details/prices are displayed faster (at checkouts) (1) • self-service checkouts possible/customers do the scanning of items(1) with a reduction in number of staff needed (1) and faster throughput of customers (1) • no need to re-label goods when prices change (1) and special offers/discounts can be made more easily (1) • collected data can be linked to stock control system (1) for use in e.g. automatic stock re-ordering (1) 	4	<p>Must be benefits to the shop. These are examples.</p> <p>Allow mix and match of valid points and expansions e.g, data capture is faster (1) so fewer staff needed (1).</p>

Question	Answer	Mark	Guidance
(b)	One description from, max 2 marks per description, from eg: <ul style="list-style-type: none"> • barcodes can be damaged/creased (1) and the data is not readable (1) and has to be entered manually (1) • barcodes can be detached/removed (1) so the item cannot be identified/no data on the goods (1) and checkout is slower (1) and customers may decide not to buy the item (1) • goods must be individually marked/labeled (1) with increased cost of packaging (1) • colours of background must be compatible with barcode reading (1) and space left on package for barcode (1) • errors in central pricing (1) and customer is charged incorrectly (1) • computer system failure (1) and goods cannot be sold/have to be manually sold (1). • cost of equipment/marketing/training staff is higher (1) adding to overheads/prices higher (1) 	2	These are examples. Allow mix and match of valid points and expansions.
3 (a)	Two advantages from eg <ul style="list-style-type: none"> • data captured automatically (1) • no need for humans to be present/records data continuously (1) • remote monitoring possible ((1) • more accurate timing of data capture (1) • more accurate measurements (1) • less/no disturbance of wildlife/birds (1) • data recorded in electronic format (1) • data/images can be displayed immediately/in real time • no need to transcribe data (1) 	2	Must be more accurate for doing something e.g. timing...do not allow 'more accurate' on its own.
(b)	One explanation from eg <ul style="list-style-type: none"> • no humans present if system fails/faulty/bird damages sensor (1) so data can be lost (1) • need wires/connections to sensors (1) which disturb environment (1) or can be dangerous (1) • cost of installing/maintaining system (1) more than manual (1) • security issues with the data (1) which may be lost/tampered with/falsified (1) • inaccuracies in the data due to electronic storage (1) such as rounding errors/space for storage (1) 	2	

Question	Answer	Mark	Guidance												
(c) (1)	<p>Chart type: Bar/pie (1)</p> <p>Reason: Easier to compare/see height of bars (1) Data is not continuous (1) Data is in discrete values (1) Data is in categories (1)</p>	2	Allow histogram for bar chart.												
(ii)	<p>Chart type: Line (1)</p> <p>Reason: One from: Data is continuous (1) Can show trends over time (1)</p>	2													
(iii)	<p>Marked as per grid below:</p> <table border="1" data-bbox="342 823 1666 1169"> <tbody> <tr> <td data-bbox="342 823 506 927">High</td> <td data-bbox="506 823 607 927">5–6</td> <td data-bbox="607 823 1666 927">The candidate has described both <i>create</i> and <i>use</i> of charts when presenting the data to her class at school.</td> </tr> <tr> <td data-bbox="342 927 506 1031">Medium</td> <td data-bbox="506 927 607 1031">3–4</td> <td data-bbox="607 927 1666 1031">The candidate has described either <i>create</i> or <i>use</i> of charts when presenting the data to her class at school.</td> </tr> <tr> <td data-bbox="342 1031 506 1134">Low</td> <td data-bbox="506 1031 607 1134">1–2</td> <td data-bbox="607 1031 1666 1134">The candidate has identified points for either <i>create</i> or <i>use</i> of charts when presenting the data to her class at school.</td> </tr> <tr> <td data-bbox="342 1134 506 1169"></td> <td data-bbox="506 1134 607 1169">0</td> <td data-bbox="607 1134 1666 1169">Response with no valid content.</td> </tr> </tbody> </table> <p>Points may include: <i>create</i>:</p> <ul style="list-style-type: none"> • import data into spreadsheet/appropriate software • select/highlight datachoose/select graph type 	High	5–6	The candidate has described both <i>create</i> and <i>use</i> of charts when presenting the data to her class at school.	Medium	3–4	The candidate has described either <i>create</i> or <i>use</i> of charts when presenting the data to her class at school.	Low	1–2	The candidate has identified points for either <i>create</i> or <i>use</i> of charts when presenting the data to her class at school.		0	Response with no valid content.	6	Allow references to proprietary/brand names of software if appropriate for the task.
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	0	Response with no valid content.													

Question	Answer	Mark	Guidance						
	<ul style="list-style-type: none"> • use/add titles/legends/axesto describe the data • add annotations/notesto explain what the data means <p><i>Use:</i></p> <ul style="list-style-type: none"> • insert into printed word processed document/DTP documentto illustrate a report/article • insert into multimedia/slideshow presentation/website/hardwarefor display to (large) audience 								
(d)	<p>Two descriptions from eg</p> <ul style="list-style-type: none"> • stream the live video from web/video camera(1) over internet for remote viewing (1) • display the live data from sensors (1) on screens for live monitoring (1) • editing the data/video (1) to summarise findings/illustrate key points (1) • detecting trends/correlations/relationships (between temperature and activity) (1) by analysing the (collected) data/video (1) • collected data submitted to e.g. environmental/wildlife organisations (1) as part of larger monitoring programme (1) 	4							
4	<p>Appropriate answers from:</p> <table border="1" data-bbox="342 943 1312 1366"> <thead> <tr> <th data-bbox="342 943 667 1010">Device</th> <th data-bbox="667 943 1312 1010">Appropriate use for the device</th> </tr> </thead> <tbody> <tr> <td data-bbox="342 1010 667 1222">A4 scanner</td> <td data-bbox="667 1010 1312 1222"> <p>One from e.g.:</p> <ul style="list-style-type: none"> • scan/make a copy of documents/photographs • capturing images from printed/ documents/photographs • digitising hard copy materials </td> </tr> <tr> <td data-bbox="342 1222 667 1366">External hard disk</td> <td data-bbox="667 1222 1312 1366"> <p>One from e.g.:</p> <ul style="list-style-type: none"> • backups of files • storage of files/data • moving files between computers </td> </tr> </tbody> </table>	Device	Appropriate use for the device	A4 scanner	<p>One from e.g.:</p> <ul style="list-style-type: none"> • scan/make a copy of documents/photographs • capturing images from printed/ documents/photographs • digitising hard copy materials 	External hard disk	<p>One from e.g.:</p> <ul style="list-style-type: none"> • backups of files • storage of files/data • moving files between computers 	4	<p>Responses must give an appropriate use for each item.</p> <p>Accept Input for a scanner and for Touch pad.</p> <p>Accept 'storage' for Ext. HDD and for USB flash memory card.</p>
Device	Appropriate use for the device								
A4 scanner	<p>One from e.g.:</p> <ul style="list-style-type: none"> • scan/make a copy of documents/photographs • capturing images from printed/ documents/photographs • digitising hard copy materials 								
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Question			Answer	Mark	Guidance
			<p>Touch pad</p> <p>One from e.g.:</p> <ul style="list-style-type: none"> entering data into a computer moving the pointer .(instead of using a mouse) 		
			<p>USB flash memory card</p> <ul style="list-style-type: none"> One from e.g.: (in a camera) for storing images (in a phone) for storing e.g. numbers, texts storage of files/data moving files between computers 		
5	(a)		<p>Two from eg</p> <ul style="list-style-type: none"> file/video too large (1) memory full (1) hard disk full (1) virtual memory file/swap file too small (1) too many commands/processes in queue for processing (1) too many applications running at once (1) software error/error message (1) CPU intensive task being carried/CPU busy (1) 	2	Do not allow viruses on own i.e. reference to viruses must indicate how the virus has caused the 'freeze'.
	(b)		<p>One explanation from:</p> <ul style="list-style-type: none"> restart computer (1) and attempt to restore work from saved file/backup (1) wait for 2-3 minutes (1) to see if computer responds/has really "frozen" (1) 	2	Allow sensible time frame for waiting.

Question	Answer	Mark	Guidance																		
6	<p>Ticks as shown:</p> <table border="1" data-bbox="427 280 1352 999"> <thead> <tr> <th data-bbox="427 280 875 347">Example</th> <th data-bbox="875 280 1117 347">Validation (✓)</th> <th data-bbox="1117 280 1352 347">Verification (✓)</th> </tr> </thead> <tbody> <tr> <td data-bbox="427 347 875 451">A password is entered twice when creating a new online account</td> <td data-bbox="875 347 1117 451"></td> <td data-bbox="1117 347 1352 451">✓</td> </tr> <tr> <td data-bbox="427 451 875 624">Copying the date of birth of a new club member into a database and checking that it is the same as on the membership form</td> <td data-bbox="875 451 1117 624"></td> <td data-bbox="1117 451 1352 624">✓</td> </tr> <tr> <td data-bbox="427 624 875 796">Entering a house number of 2 into a street database and receiving the message that houses in that street start at number 10.</td> <td data-bbox="875 624 1117 796">✓</td> <td data-bbox="1117 624 1352 796"></td> </tr> <tr> <td data-bbox="427 796 875 863">Entering data by choosing from a drop down list</td> <td data-bbox="875 796 1117 863">✓</td> <td data-bbox="1117 796 1352 863"></td> </tr> <tr> <td data-bbox="427 863 875 999">Not being able to submit an online form because you haven't entered all of the required data</td> <td data-bbox="875 863 1117 999">✓</td> <td data-bbox="1117 863 1352 999"></td> </tr> </tbody> </table>	Example	Validation (✓)	Verification (✓)	A password is entered twice when creating a new online account		✓	Copying the date of birth of a new club member into a database and checking that it is the same as on the membership form		✓	Entering a house number of 2 into a street database and receiving the message that houses in that street start at number 10.	✓		Entering data by choosing from a drop down list	✓		Not being able to submit an online form because you haven't entered all of the required data	✓		5	
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Question	Answer	Marks	Content	Guidance
7*	<p>This question to be marked as levels of response:</p> <p>Answers may make reference to:</p> <p>speed of transmission/communication the interception of personal information by others the abuse of personal information by others</p> <p>the monitoring of the loss/corruption of information the detection of the loss/corruption of information the prevention of the abuse of personal information the security of (public) data links between private and public databases the purpose and costing of national databases CCTV and surveillance access to personal data by government agencies</p>	8	<p>Level 3: Two good explanations.</p> <p>Level 2: top of band: One good explanation or several good descriptions.</p> <p>Level 2: bottom of band: Brief explanation(s) or description(s).</p> <p>Level 1: A list of points.</p>	<p>Levels of response</p> <p>Level 3 (7–8 marks) Candidates will explain in detail at least two social and ethical implications of the electronic transmission of personal information. The information will be relevant, clear, organised and presented in a structured and coherent format. Specialist terms will be used correctly and appropriately. There will be few, if any, errors in grammar, punctuation and spelling.</p> <p>Level 2 (4–6 marks) Candidates will explain and/or describe the social and/or ethical implication(s) of the electronic transmission of personal information. For the most part, the information will be relevant and presented in a structured and coherent format. Specialist terms will be used appropriately and for the most part correctly. There may be occasional errors in grammar, punctuation and spelling.</p> <p>Level 1 (1–3 marks) Candidates will identify some of the social and/or ethical implication(s) of the electronic transmission of personal information. Answers may be in the form of a list. There will be little or no use of specialist terms. Errors of grammar, punctuation and spelling may be intrusive.</p> <p>Zero marks: Response with no valid content.</p>

Question	Answer	Mark	Guidance
8	One reason for each rule, from eg Rule 1: to ensure that you never lose more than one hours work/that the backup contains the latest versions/work (1) Rule 2: to ensure that there is a copy if the single backup is damaged/destroyed/lost (1) Rule 3: to be able to find/retrieve the backup quickly/easily (1) Rule 4: so that any backup is not lost if the work area/computer is compromised/stolen/interfered with/corrupted/damaged (1)	4	Rule 1: response must refer to the fact that only recent data would be lost or only data for last hour would be lost.

Question	Answer	Marks	Guidance	
			Content	Levels of response
9*	<p>This question to be marked as levels of response:</p> <p>Answers may refer to:</p> <p>storage on local network servers 'cloud' computing i.e. storage on remote servers via the internet wireless connections hard wired connections access to data from anywhere access to data from portable devices such as smartphones e.g. streaming of music to any device disaster recovery by isolating files etc. from local disaster/loss/corruption (legal) sharing of files e.g. music no/reduced cost of installing/maintaining storage system/servers no/reduced cost of installing/set up of user IDs and passwords/access rights no/reduced cost of creating backups network/internet connection required delays accessing files if no connection/poor connection security of files not under local control/may not be as secure no/less control of where files are stored/which country files are stored in loss of files if host company goes out of business</p>	8	<p>Level 3: At least two good, detailed descriptions. Appropriate examples of each must be given.</p> <p>Level 2: top of band: Description of a benefit and description of a drawback.</p> <p>Level 2: bottom of band: Brief/outline descriptions or description of either benefit or drawback and points of either drawback or benefit. Must be reference to both. Examples must be given.</p>	<p>Level 3 (7–8 marks) Candidates will describe in detail at least one benefit and at least one drawback of using remote storage systems for storing files. Examples will be given and will be appropriate. The information will be relevant, clear, organised and presented in a structured and coherent format. Specialist terms will be used correctly and appropriately. There will be few, if any, errors in grammar, punctuation and spelling.</p> <p>Level 2 (4–6 marks) Candidates will describe at least one benefit and at least one drawback of using remote storage systems for storing files. Examples will be given and will be mostly appropriate. For the most part, the information will be relevant and presented in a structured and coherent format. Specialist terms will be used appropriately and for the most part correctly. There may be occasional errors in grammar, punctuation and spelling.</p>

Question		Answer	Marks	Content	Guidance
					Levels of response
				<p>Level 1: A list of points.</p>	<p>Level 1 (1–3 marks) Candidates will identify some of the benefit(s) and/or drawback(s) of using remote storage systems for storing files. Answers may be in the form of a list. There will be little or no use of specialist terms. Errors of grammar, punctuation and spelling may be intrusive.</p> <p>Zero marks: Response with no valid content.</p>
		Total	60		

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