OCR
RECOGNISING ACHIEVEMENT

GCSE

ICT

General Certificate of Secondary Education

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

Mark Scheme for June 2013

OCR (Oxford Cambridge and RSA) is a leading UK awarding body, providing a wide range of qualifications to meet the needs of candidates of all ages and abilities. OCR qualifications include AS/A Levels, Diplomas, GCSEs, Cambridge Nationals, Cambridge Technicals, Functional Skills, Key Skills, Entry Level qualifications, NVQs and vocational qualifications in areas such as IT, business, languages, teaching/training, administration and secretarial skills.

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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.

1. **Annotations**

Annotation	Meaning
✓	Correct response
✗	Incorrect or invalid response.
TV	Response too vague to be of credit
BOD	Benefit of doubt given.
NBOD	No benefit of doubt given.
Link	Used to link Additional objects back to original question.

2.   Subject-specific Marking Instructions

IMPORTANT UPATE:

ADDITIONAL OBJECTS: You **must** annotate the additional objects for each script you mark. If no credit is to be awarded for the additional object, please use annotation as agreed at the SSU, likely to be 'seen' or the highlighting tool.

CROSSED OUT, RUBRIC ERROR (OPTIONAL QUESTIONS) AND MULTIPLE RESPONSES

Crossed-out Responses: Where a candidate has crossed out a response and provided a clear alternative then the crossed out response is not marked. Where no alternative response has been provided, examiners may give candidates the benefit of the doubt and mark the crossed out response where legible.

Rubric Error Responses – Optional Questions: Where candidates have a choice of question across a whole paper or a whole section and have provided more answers than required, then all responses are marked and the highest mark allowable within the rubric is given. *(The underlying assumption is that the candidate has penalised themselves by attempting more questions than necessary in the time allowed.)*

Multiple Choice Question Responses: When a multiple choice question has only a single, correct response and a candidate provides two responses (even if one of these responses is correct), then no mark should be awarded (as it is not possible to determine which was the first response selected by the candidate). *When a question requires candidates to select more than one option/multiple options, then local marking arrangements need to ensure consistency of approach.*

Contradictory Responses: When a candidate provides contradictory responses, then no mark should be awarded, even if one of the answers is correct.

Short Answer Questions (requiring only a list by way of a response, usually worth only **one mark per response**): Where candidates are required to provide a set number of short answer responses then only the set number of responses should be marked. The response space should be marked from left to right on each line and then line by line until the required number of responses have been considered. The remaining responses should not then be marked. Examiners will have to apply judgement as to whether a 'second response' on a line is a development of the 'first response', rather than a separate, discrete response. *(The underlying assumption is that the candidate is attempting to hedge their bets and therefore getting undue benefit rather than engaging with the question and giving the most relevant/correct responses.)*

Short Answer Questions (requiring a more developed response, worth **two or more marks**): If the candidates are required to provide a description of, say, three items or factors and four items or factors are provided, then mark on a similar basis – that is downwards (as it is unlikely in this situation that a candidate will provide more than one response in each section of the response space.)

Longer Answer Questions (requiring a developed response): Where candidates have provided two (or more) responses to a medium or high tariff question which only required a single (developed) response and not crossed out the first response, then only the first response should be marked. Examiners will need to apply professional judgement as to whether the second (or a subsequent) response is a 'new start' or simply a poorly expressed continuation of the first response.

Question			Answer	Marks	Guidance
1	**(a)**		6/six (1)	1	
					If no response for (i), (ii), (iii) check the diagram.
	(b)	**(i)**	(a) foreign (key)	1	Accept any identifiable reference to the top one in the list.
		(ii)	(the) primary (key)	1	Accept any identifiable reference to the last one in the list
		(iii)	(a) many to one (relationship)	1	Accept any identifiable reference to the third one in the list
	(c)	**(i)**	Three features from, maximum two marks per feature, one mark for the feature plus one mark for a valid description: eg • (ability to have) multiple views (1) blank screen to insert content (1) • HTML code view (1), side by side views of code/actual page (1) • (ability to) insert/create headings/subheadings (1) and size of headings/subheadings (1) using toolbar buttons (1) • (ability to) insert (hyper)links (1) and set (hyper)link(s) destination/other features/details (1) • (ability to) insert images (1) and resize/reposition on page (1) • (ability to) insert/type text (1) and format it (1)	6	The bullet points are examples; accept other valid responses such as multimedia, sound, video etc. Descriptions must be appropriate to the feature given.
		(ii)	Two descriptions from, maximum two marks per description: eg • copy image (1) and paste image (1) • save/export image (1) and insert/import image (1) • select image (1) drag/drop image (1)	4	

Question	Answer	Marks	Guidance
2	One use per device: eg 	Device	Use
---	---
Mouse	to select options/object/text to drag/drop/place
Keyboard	entering text/commands
Monitor	Viewing/display results of actions
Printer	to print to produce hard copy/pages
Hard disk drive	storage/storing the files		5	Accept navigate around the screen for mouse. These are generic answers but are valid so: Accept input for mouse Accept input for keyboard Accept output for monitor Accept output for printer

Question			Answer	Marks	Guidance
3	(a)		Three features from, maximum two marks per feature, one mark for the feature plus one mark for a valid description: eg • (shopping) basket/cart (1) to add goods for purchase (1) • search feature (1) to find goods to purchase (1) • payment options (1) to allow customers to enter details of payment cards/personal details (1) • secure data transfer (1) of personal details/payment details (1) • text entry boxes/forms (1) for collecting customer details/quantity of goods (1) • feedback/comment forms/boxes (1) to collect customer comments/notes/special delivery options (1) •	6	Allow any feature that is part of the shopping and purchasing experience.
	(b)		Two explanations from, maximum two marks per explanation: eg • use a firewall (1) to control data flow/examine contents of data packets (1) • use up to date antivirus/malware software (1) to scan incoming data for spyware/viruses (1) to prevent data being stolen (1) • use passwords/user IDs(1) and restrict the use to selected employees/known only to user (1) • encryption (1) to make the data unreadable (1) • Physical security (1) to prevent unauthorised access to hardware (1) • Biometrics (1) to generate/create a unique code for that person (using physical attributes) (1)	4	One mark for the method plus one for a valid explanation.

Question			Answer	Marks	Guidance
4			When cell contents/formulas copied/replicated/moved (1) (then) internal references to other cells change (1)	2	
5			One explanation from: maximum of two marks per explanation: eg environment (1) generated by computer (1) to simulate real life (1) One mark for suitable example: eg computer games (1) training simulations eg medical/ surgical (1)	3	Note: max 2 marks for the explanation plus mark for an example.

Question			Answer	Marks	Guidance	
					Content	**Levels of response**
6			This question to be marked as levels of response: Answers may refer to: • safe, secure and responsible disposal of computer hardware with reference to the data held thereon • additional costs of safe disposal • problems of disposal of large items by householder • problems of disposal of components by householder • problems of disposal of wiring by householder • metals etc dumped will find their way into food chain even if dumped in other countries • lack of recycling facilities in area • local authorities won't take such objects without a fee • fly tipping is illegal but more common • modern computers/laptops less easily taken apart to re-use components at home • old components so out of date not worth re-using • need to dispose of rare elements safely • non-biodegradable components used • shipping components to other countries where regulations not so strict • regulations regarding export of components • recycling by charities to other countries	8		**Level 3 (7–8 marks)** Candidates will explain a range of different issues associated with disposal of unwanted computers. 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. **Level 2 (4–6 marks)** Candidates will explain issues associated with disposal of unwanted computers. 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. **Level 1 (1–3 marks)** Candidates will identify some of the issues associated with the disposal of unwanted computers. 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.

Question			Answer	Marks	Guidance
7			One appropriate example of computer hardware (1) eg monitor One appropriate example of computer software (1) eg utility	2	Accept brand names for hardware and software but not company names unqualified eg IPad, Publisher etc. but not e.g. Microsoft, Apple etc. without a product name.
8			Descriptions, any six from: • expert system presents selections/questions to doctor (1) • doctor inputs/data from sensors symptoms of illness (1) • via user interface/keyboard/menus (1) • system searches the knowledge base/database (1) • which contains collected knowledge/medical conditions of experts/doctors (1) • rules base/inference engine (1) • system outputs <u>further/additional</u> investigations/questions (1) • to collate/reference/relate input by doctor (1) • system outputs suggested/possible illness/condition (1) • probabilities (1) • doctor makes diagnosis based on own expertise and probabilities from system (1)	6	Stages do not have to be in the correct sequence.
9			Ticks as shown: <table><tr><td>Task</td><td>Debugger</td><td>Compiler</td></tr><tr><td>Finding errors in program code</td><td>✓</td><td></td></tr><tr><td>Turning instructions written by a programmer into program code</td><td></td><td>✓</td></tr></table>	2	

Question			Answer	Marks	Guidance	
					Content	**Levels of response**
10			This question to be marked as levels of response: Answers may include: fewer workers needed for manufacture can be maintained by fewer staff maintenance costs lower than wages paid to many staff/workers can be remotely controlled manufacturing process is safer for workers can work continuously/no need for breaks can be re-tooled to make other parts/ do other jobs production is consistent in quality can use CAD/CAM expensive to purchase specialised robotics need skilled workers/software engineers to re-program or retool the robots no skilled work force for manufacturing process itself fully dependant on continuous power supply	8		**Level 3 (7–8 marks)** Candidates will discuss a range of different impacts of using robotics in manufacturing. 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. **Level 2 (4–6 marks)** Candidates will discuss the impacts of using robotics in manufacturing. 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. **Level 1 (1–3 marks)** Candidates will identify impacts or describe an impact of using robotics in manufacturing. 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.
			Total	**60**		

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