



GCE

ICT

Unit **G061**: Information, Systems and Applications

Advanced Subsidiary GCE

Mark Scheme for June 2015

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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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Annotations

Annotation	Meaning
	Omission mark
BOD	Benefit of doubt
	Cross
FT	Follow through
NAQ	Not answered question
NBOD	Benefit of doubt not given
P	Point being made
REP	Repeat
	Tick
TV	Too vague
BP	Blank Page
SEEN	Seen
NR	No Response

Subject-specific Marking Instructions

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.

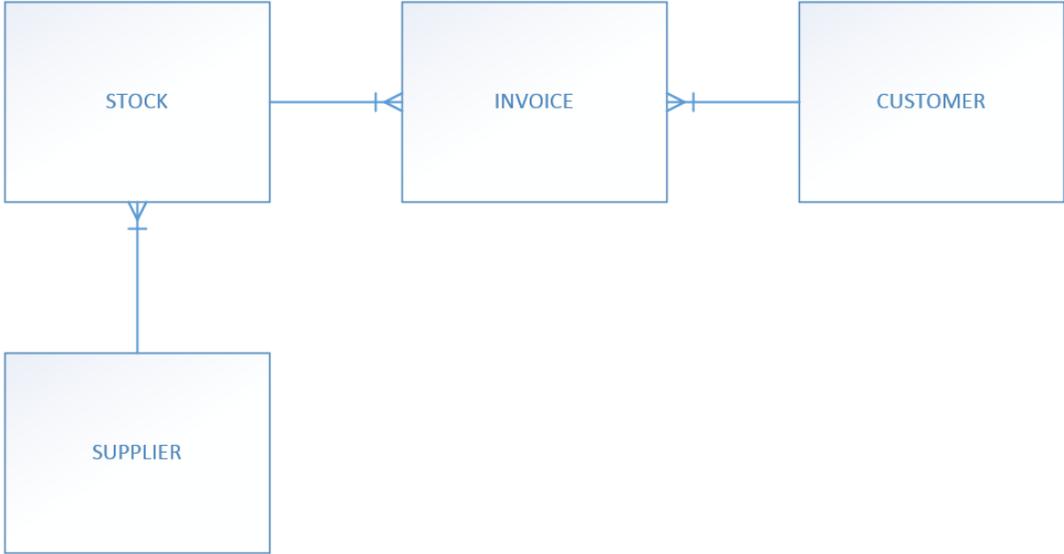
Examiners will need to apply professional judgement as to whether the second (or a subsequent) response is a 'new start' or simply a poorly expressed continuation of the first response.

Question	Answer	Marks	Guidance								
1a	2 from, 2 marks each, e.g. Accuracy of information: whether the information is correct (1) eg typed 5 meant to type 10 (1) Presentation: how the information appears/looks (1) e.g figures presented as a table/graph (1)	4	Examples not have to be related to the context. No example, max 1 mark								
1b	<table border="1"> <tr> <td>4</td> <td>Two complete comparisons.</td> </tr> <tr> <td>3</td> <td>One complete comparison and one individual point.</td> </tr> <tr> <td>2</td> <td>One complete comparison OR Two individual points about either side.</td> </tr> <tr> <td>1</td> <td>One individual point about either side.</td> </tr> </table> <p>Answers may include: Dynamic will be up to date whereas static will only be as up-to-date as when it was printed Can copy and paste from a dynamic source whereas have to retype/scan a static source Static source may be more reliable as can check the publisher whereas a dynamic source may have been posted on the internet by anyone.</p>	4	Two complete comparisons.	3	One complete comparison and one individual point.	2	One complete comparison OR Two individual points about either side.	1	One individual point about either side.	4	
4	Two complete comparisons.										
3	One complete comparison and one individual point.										
2	One complete comparison OR Two individual points about either side.										
1	One individual point about either side.										
1c	2 from, 2 marks each e.g: Readily available (1) can be obtained/used quickly (1) Wide range of choice (1) likely to find one that matches what you want (1) Can be included with the application (1) no additional money needs to be spent (1)	4									
2a	2 from, e.g: What would I have to give each gardener extra for my overall wage bill to be under £5000 a week? (1) What would my travel expenses be if I paid the gardeners an additional £0.05 per mile (1) What would I have to increase the charge to customers per hour for each employee to make £250 a day? (1)	2	Must be about the garden business								
2b	2 from, 2 marks each e.g: Cells: individual item of data / where a column and a row intersects (1) hold hourly pay/employee name (1) Ranges: collection of cells/cells identified top left to bottom right (1) hold wages paid in a month to graph (1)	4	Max 2 if no examples. Example must relate to garden business Accept diagrams for description								

Question	Answer	Marks	Guidance
3ai	2 from, 2 marks each e.g.: Screen magnifier (1) enlarges the screen (1) Speakers (1) to speak the content of the screen (1) Microphone (1) to enter the spoken work into the computer (1)	4	
3aai	2 from, 2 marks each e.g.: Text to speech (1) converts the text on the screen and outputs through the speakers (1) Mouse trails (1) line behind the mouse so it can be seen (1) High Contrast colour schemes (1) text/windows/opposite colours so easy to differentiate (1) Screen magnifier (1) enlarges highlighted portion of the screen (1)	4	
3b	2 from, 2 marks each e.g.: RSI: typing with wrists in the same place / repetitive activity (1) Solution: wrist wrest / 5 minute break every hour / adjustable chair (1) Eyesight defects: staring at the computer screen for long periods of time / bright colours on the monitor (1) Solution: dimmer switch in room / blinds at window / 5 minute break every hour / adjustable chair (1)	4	Solutions must be different.
4a	2 from, 2 marks each e.g.: Nothing left out (1) placeholders for content/amount owed (1) House style incorporated (1) logo etc in place (1) Novice users can use document (1) without having the skills to create it (1) Faster to create document (1) formatting already done (1).	4	Allow examples related to quotation
4b	1 mark each for examples e.g.: Section: costs table in middle of page / layout change for detailed descriptions of costs (1) Footer: additional information about a product/notes about a charge made e.g. company name / page number (1)	2	Examples must relate to garden company quotations
5	2 from, 2 marks each e.g.: Real garden might not look the same (1) customers want their money back (1) Difficult to include all known variables in the model (1) differences between the model and reality (1) Some elements, such as weather difficult to model (1) cannot accurately be predicted (1)	4	
6	3 from, 2 marks each e.g.: Stores details of customers (1) name/address (1) Links to products (1) retrieves prices for stock (1) Stores services information (1) that the customer has purchased (1) Stores payment history (1) invoices outstanding/statements (1)	6	

Question	Answer	Marks	Guidance
7a	2 from, 2 marks each, e.g: Text box (1) To allow data to be typed (1) Drop down box (1) list of choices to select from (1) Button (1) to click to perform and action (1) Combo box (1) list of choices to select from (1). Spinner (1) to move through a range (1)	4	Allow example of use of form control for 2 nd mark
7bi	2 from, must have both parts for the mark e.g: Male / M (1) Weeding / W (1) Day of the week / 3 (1)	2	Must be linked to the booking form Do not allow Female/F
7bii	2 from, 2 marks each e.g: Coarsening of data (1) original data input is more general than intended (1) Codes required (1) if they are not known then data cannot be understood (1) Can run out of codes (1) limited number (1)	4	
7c	<div data-bbox="490 762 1361 1235" data-label="Diagram"> <pre> graph LR subgraph Input I["Name, email and address of customer Time, date and list of services required"] end subgraph Processing P["Appointment Diary Checked for availability"] end subgraph Output O1["Customer informed by email - booking confirmed"] O2["Customer informed by email - booking declined"] end subgraph Storage S["Name, email and address of customer Time, date and list of services required"] end I --> P P --> O1 O1 --> P P -- "If booking can be made" --> S S --> O2 </pre> </div> <p data-bbox="309 1289 1167 1321">1 mark for each – input (1), Processing (1) Storage (1), Output (2)</p>	5	Must be a diagram
7di	Digit at end of number (1) removed and calculation performed on remaining number – result checked against check digit (1)	2	

Question	Answer	Marks	Guidance												
7dii	2 from e.g.: Length (1) Presence (1) Range (1) Type (1) Format/picture/input mask (1)	2	Do not accept check digit												
8a	<table border="1" data-bbox="315 437 1469 679"> <tbody> <tr> <td>High</td> <td>5-6</td> <td>The candidate has explained in detail why a database is suitable for the task.</td> </tr> <tr> <td>Medium</td> <td>3-4</td> <td>The candidate has described advantage(s) of using a database for the task.</td> </tr> <tr> <td>Low</td> <td>1-2</td> <td>The candidate has identified advantage(s) of using a database for the task.</td> </tr> <tr> <td></td> <td>0</td> <td>Not worthy of credit</td> </tr> </tbody> </table> <p>Answers may include: Structure is suitable for holding records and fields. Calculations can be performed, such as calculating the invoices without using a different application. Reports can be printed which include the house style and act as a mail merge to produce invoices for customers. Data can be archived so it can be referenced later if required.</p>	High	5-6	The candidate has explained in detail why a database is suitable for the task.	Medium	3-4	The candidate has described advantage(s) of using a database for the task.	Low	1-2	The candidate has identified advantage(s) of using a database for the task.		0	Not worthy of credit	6	
High	5-6	The candidate has explained in detail why a database is suitable for the task.													
Medium	3-4	The candidate has described advantage(s) of using a database for the task.													
Low	1-2	The candidate has identified advantage(s) of using a database for the task.													
	0	Not worthy of credit													
8bi	2 from: To link tables together (1) reduce data duplication (1) increase referential integrity (1) To enable queries to be run on multiple tables (1)	2													
8bii	2 from: To remove orphaned data from the database (1) and ensure all data is linked together (1) To remove data duplication (1) and reduce the size of the database (1)	2													
8c	Number of employees required: integer (1) Number of hours job will take: real/decimal (1)	2	Do not accept number												

Question	Answer	Marks	Guidance
8d	<p>Date = 16/6/2016 AND CustomerID = 43 AND Paid? = Y AND Time > 12.00</p> <p>All 4 – 3 marks Any 3 – 2 marks Any 2 – 1 mark 3 AND's joining (1).</p>	4	
8e	 <pre> graph TD STOCK[STOCK] --- INVOICE[INVOICE] INVOICE --- CUSTOMER[CUSTOMER] SUPPLIER[SUPPLIER] --- STOCK </pre> <p>The diagram shows four entities: STOCK, INVOICE, CUSTOMER, and SUPPLIER. STOCK is connected to INVOICE with a one-to-many relationship (1 to many). INVOICE is connected to CUSTOMER with a one-to-many relationship (1 to many). SUPPLIER is connected to STOCK with a one-to-many relationship (1 to many).</p> <p>SUPPLIER – STOCK (1) STOCK – INVOICE (1) INVOICE – CUSTOMER (1)</p> <p>Three correct relationships (1)</p>	4	

Question	Answer	Marks	Guidance
9	2 from, 2 marks each e.g.: Single data source can be used (1) does not require it to be created specially/ensures consistency (1) Standard letter less likely to have errors (1) only needs to be checked once (1) Speeds up creation (1) allows other work to be done in same time (1)	4	Not personalisation
10a	2 marks each: Hyperlink: A link from text/image (1) that can be clicked and take you to a different slide/webpage Animation: Moving text or images (1) such as rotate (1)	4	Allow examples related to garden presentation
10b	2 from, 2 marks each: Interaction on the slide (1) Sound/video can be included (1) Quality of slide does not deteriorates over time (1) no finger prints on slides (1) Slides cannot be lost (1) order will be known/same (1) Presenter does not need to be next to computer (1) can move around the room (1)	4	
11a	2 from, e.g. Backing up is making a copy (1) archive is moving the data (1) Backup is online (1) archive is off line (1)	2	
11b	2 from, 2 marks each e.g : Locked doors (1) require a key to get through the door (1) Passwords (1) entered correctly to access the data (1) Access rights (1) if not correct userID and password cannot get to the data (1) Encryption (1) data is unintelligible without the key (1)	4	

Question	Answer	Marks	Guidance
12a	<p>Two From: Personal Data shall be processed fairly and lawfully (1)</p> <p>Personal data shall be obtained only for one or more specified and lawful purposes, and shall not be further processed in any manner incompatible with that purpose or those purposes (1)</p> <p>Personal data shall be adequate, relevant and not excessive in relation to the purpose or purposes for which they are processed. (1)</p> <p>Personal data shall be accurate and, where necessary, kept up to date. (1)</p> <p>Personal data processed for any purpose or purposes shall not be kept for longer than is necessary for that purpose of those purposes. (1)</p> <p>Personal data shall be processed in accordance with the rights of data subjects under this Act. (1)</p> <p>Appropriate technical and organisational measures shall be taken against unauthorised or unlawful processing of personal data and against accidental loss or destruction of, or damage to, personal data. (1)</p> <p>Personal data shall not be transferred to a country or territory outside the European Economic Area unless that country or territory ensures an adequate level of protection for the rights and freedoms of data subjects in relation to the processing of personal data. (1)</p>	2	
12b	<p>2 from, 2 marks each: Proving that the image is theirs (1) may be many like it and difficult to prove individual images (1) Knowing who has the image (1) and who to take to court (1) Proving that they own the copyright to the original image (1) and are the right people to take action (1) Financial consequences (a) can cost a lot of money to prove copyright (1) Worldwide location (1) law only valid in UK (1)</p>	4	

Question	Answer			Marks	Guidance
13	9–11	4	<p>The candidate is able to show a detailed level of understanding by giving detailed explanations about the impact of developments in ICT on the way customers could browse and purchase plants from Greenfingers@Coventry.</p> <p>There will be more than one line of reasoning, with each line demonstrating detailed explanations supported by relevant examples and the logical flow of the discussion will be evident.</p> <p>Ideas will be expressed clearly and fluently using specific knowledge to support and inform the discussion. Subject specific terminology, where used, will be accurate and appropriate. Spellings, grammar and punctuation will be used correctly.</p>		<p>Band 9-11 – detailed explanations with supporting evidence – this means reasons linked to the topic of the question.</p> <p>Responses will be similar to 6-8 but will have at least two lines of reasoning that have been examined in rigorous depth</p> <p>Band 6-8 - Detailed explanation of one line of reasoning ; responses will show a clear and logical chain of reasoning that explains a particular point. Depth of analysis of the point made is the indicator of the 6-8 band. i.e. depth</p> <p>Band 3-5 – Describe; Responses will be descriptions only. Rigorous analysis of the points made is lacking.</p> <p>Band 1-2 – Identify; Responses will be typified by a list of points.</p>
	6–8	3	<p>The candidate is able to show a good level of understanding by giving a detailed explanation about the impact of developments in ICT on the way customers could browse and purchase plants from Greenfingers@Coventry.</p> <p>There will be a single line of reasoning demonstrating a detailed explanation supported by relevant examples and the logical flow of the discussion will be present but may be stilted.</p> <p>Subject specific terminology, where used, will be accurate. For the most part spellings, grammar and punctuation will be used correctly.</p>		
	3–5	2	<p>The candidate will describe the impact of developments in ICT on the way customers could browse and purchase plants from Greenfingers@Coventry.</p> <p>Subject specific knowledge will be evident and some subject terminology will be used. There may be occasional errors in spelling, grammar and punctuation.</p>		
	1–2	1	<p>The candidate is able to identify relevant points related to the impact of developments in ICT on the way customers could browse and purchase plants from Greenfingers@Coventry.</p> <p>Subject specific terminology may be limited or missing. Errors of grammar, punctuation and spelling may be intrusive.</p>		
		0	Not worthy of credit		
<p>Point may include:</p> <p>Use of smellovision to get a better idea of how the plant will smell when in the garden. Not going to be a perfect match and is smelt in isolation rather that in conjunction with the other plants in the garden.</p> <p>Customer can walk through a virtual garden and select plants they like which adds them to a shopping list. Can get carried away and select lots of plants – too many for size of garden or wallet.</p> <p>Plants seen on a website/holographic may not end up like that in the customer’s garden as they might not have the same degree of skills in looking after the plants.</p>			11		

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