

Mark Scheme for June 2011

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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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Any enquiries about publications should be addressed to:

OCR Publications
PO Box 5050
Annesley
NOTTINGHAM
NG15 0DL

Telephone: 0870 770 6622
Facsimile: 01223 552610
E-mail: publications@ocr.org.uk

Question		Max Mark	Rationale						
1 (a) (i)	<p>Circle the following features on the poster and label them as shown in the table</p> <p>One mark for each correct identification.</p> <p>B – Right justified text. All or part of ‘Gill Graham’. C – Italic text. All or part of ‘<i>Only 50p for a two hour session</i>’ D – A bullet. Circle either one or two of the bullets  only. E – Bold text. All or part of ‘Come to our Judo Sessions’. F – Centred text. All or part of ‘Kelmoor Youth Centre – Judo Classes.’</p>	[5]	<p>Responses do not have to be complete circles can point to a section provided that it is unambiguous. Do not have to circle entire example.</p> <p>To differentiate that the candidate knows the difference between bullets and bullet points only the bullet should be circled.</p>						
1 (a) (ii)	<p>Complete the table below stating the changes you would make. For each change state how it would improve the appearance of the poster</p> <table border="1" data-bbox="304 727 1283 1326"> <thead> <tr> <th data-bbox="304 727 792 799">How the item could be changed</th> <th data-bbox="799 727 1283 799">How the change would improve the appearance of the poster</th> </tr> </thead> <tbody> <tr> <td data-bbox="304 804 792 1078"> Text e.g. <ul style="list-style-type: none"> • font size • centre • colour • bold, italics, underline </td> <td data-bbox="799 804 1283 1078"> e.g. <ul style="list-style-type: none"> • more balanced / aesthetically pleasing • reduces white space / less cluttered • catches the eye / stands out </td> </tr> <tr> <td data-bbox="304 1083 792 1326"> Frame e.g. <ul style="list-style-type: none"> • remove the frame • change the frame to a patterned frame </td> <td data-bbox="799 1083 1283 1326"> e.g. <ul style="list-style-type: none"> • more balanced / aesthetically pleasing • reduces white space / less cluttered • catches the eye / stands out </td> </tr> </tbody> </table>	How the item could be changed	How the change would improve the appearance of the poster	Text e.g. <ul style="list-style-type: none"> • font size • centre • colour • bold, italics, underline 	e.g. <ul style="list-style-type: none"> • more balanced / aesthetically pleasing • reduces white space / less cluttered • catches the eye / stands out 	Frame e.g. <ul style="list-style-type: none"> • remove the frame • change the frame to a patterned frame 	e.g. <ul style="list-style-type: none"> • more balanced / aesthetically pleasing • reduces white space / less cluttered • catches the eye / stands out 	[4]	<p>Any reasonable suggestion will gain marks.</p> <p>Not “more professional” for improvement. The change must match the improvement. Marks cannot be awarded twice for the same improvement.</p> <p>No marks awarded for improvement without a valid change.</p> <p>For frame – not more interesting to read.</p>
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Question		Max Mark	Rationale
1 (b) (i)	<p>Describe what Gill has done to image 1 to obtain image 2</p> <ul style="list-style-type: none"> • selected black ink (1) flood / fill (1) • using the rubber/cropped the image (1) removed the mat (1) (must have first point to get second mark) • make the image smaller 	[3]	Award marks for other methods of doing this e.g. select area around mat and press the delete key, these should be covered by the last two mark points. Treating the image as a vector image and ungrouping and deleting. No marks for coloured
1 (b) (ii)	<p>Describe what Gill has done to image 2 to obtain image 3</p> <p>Instructor Marking this question involves reading the whole question through, noting what is there and placing the response in a band. Marks within a band are awarded depending on the quality of the answer.</p> <p>BANDED RESPONSE MARK SCHEME: This question to be marked as levels of response:</p> <p>Level 3 (5 or 6 marks)</p> <p>If you were to follow the candidate's instructions then you will end up with image 3.</p> <p>Specialist terms will be used correctly and appropriately.</p> <p>Level 2 (3 or 4 marks)</p> <p>If you were to follow the candidate's instructions you will not end up with image 3, however, with a little bit of thought if you could either fill in a missing stage or alter the order of instructions, you would end up with image 3.</p> <p>Specialist terms will be used appropriately and for the most part correctly.</p>	[6]	

Question		Max Mark	Rationale
	<p>Level 1 (1-2 marks) Answers may be simplistic and may be in the form of a list. If you were to follow the candidate's instructions you will not end up with image 3. Even with a little alteration in the instructions you will still not be able to end up with image 3.</p> <p>There will be little or no use of specialist terms.</p> <p>This is an example of how the final image could have been produced.</p> <ol style="list-style-type: none"> 1. (The background has been set to transparent) 2. The graphic has been copied and pasted 3. The copied graphic has been rotated through x° 4. The graphic has been superimposed (pasted) onto the existing graphic. 5. Steps 3 and 4 have been repeated with another image that has been rotated through $x^\circ + y^\circ$ 6. The combined graphic has been copied 7. The combined graphic has been flipped (not rotated) 8. A number of copies of the combined and flipped images have been moved to obtain the final image 		<p>There will be other methods of producing the final image.</p>
2 (a) (i)	<p>How many fields are shown in Fig. 4?</p> <ul style="list-style-type: none"> • 7 	[1]	Only one answer possible.
2 (a) (ii)	<p>How many records are shown in Fig. 4?</p> <ul style="list-style-type: none"> • 8 	[1]	Only one answer possible.

Question		Max Mark	Rationale
2 (b) (i)	<p>Explain the purpose of the Membership number</p> <ul style="list-style-type: none"> • Unique • Identifier • It is the key field • It is used to link tables 	[3]	First two are required for full marks. You will get answers e.g. To identify the people because there might be two people of the same name – this meets the first two bullet points.
2 (b) (ii)	<p>Explain why there are no entries for Membership numbers 003, 007, 011 and 012</p> <ul style="list-style-type: none"> • No longer members/membership has run out • Deleted/removed from database • When new records are created the old ones are not reassigned 	[2]	
2 (c) (i)	<p>Validation rule</p> <p>(A rule that)</p> <ul style="list-style-type: none"> • Checks data / reduces the possibility of making a mistake • Before it is processed/when inputted/typed in • Sensible / reasonable / within limits / obeys the rules / suitable example 	[3]	'Check on data that is input' meets the first and last bullet point.
2 (c) (ii)	<p>Explain how you could set up validation for the DOB (date of birth) field</p> <ul style="list-style-type: none"> • In design view (when creating the database) / when designing / when setting up • Select field – DOB • Select 'Validation'. • Type >01/01/1930 (1 mark for > 1 mark for a reasonable date) 	[5]	There will be other ways of achieving the same result. No marks for drop down boxes as it is a single field.

Question		Max Mark	Rationale
2 (d) (i)	<p>Explain the purpose of each of these features, using examples from the club's database</p> <p>Sort</p> <ul style="list-style-type: none"> • arranging data items / put records in a specific order • in a predetermined order / the way you want it • e.g. alphabetical / numerical <p><u>Example</u></p> <ul style="list-style-type: none"> • sort last name into alphabetical order • easier to find details of a person (manually) 	[3]	If no example given maximum of 2 marks. Example must relate to the club's database. No mark for sorted by Membership Number.
2 (d) (ii)	<p>Search</p> <ul style="list-style-type: none"> • process of examining a file / find a record(s)/information • to see whether a given data item occurs in it • successful location is called a hit <p><u>Example</u></p> <ul style="list-style-type: none"> • to find Mustafa Ghannoum • to send an email to him about ... 	[3]	If no example given maximum of 2 marks. Example must relate to the club's database.
2 (d) (iii)	<p>Report</p> <ul style="list-style-type: none"> • presentation of selected data / from a query • usually output in the form of a table • enables formatting to be carried out <p><u>Example</u></p> <ul style="list-style-type: none"> • to group those of similar ability • in order to produce session registers 	[4]	Example must relate to the club's database.

Question		Max Mark	Rationale
2 (d) (iv)	<p>Forms</p> <ul style="list-style-type: none"> • that you can use to enter data • that you can use to edit data • that you can use to display data • from a table or a query • so that one record can be seen at a time <p><u>Example</u></p> <ul style="list-style-type: none"> • to enter the data into the members database 	[4]	Example must relate to the club's database.
3 (a)	<p>Give one input and two output devices that are needed to maintain the room at a constant temperature</p> <p>Input</p> <ul style="list-style-type: none"> • (Temperature) sensor/reader / thermostat / thermistor <p>Output</p> <ul style="list-style-type: none"> • Device to open a window • A fan • A heater • Air-conditioning 	[3]	Must be a device
3 (b)	<p>Describe how a constant room temperature is maintained.</p> <ul style="list-style-type: none"> • The temperature is (constantly) monitored • If the temperature rises above a certain value (1) a fan is turned on (1) until the temperature reaches the desired level (1) • If the temperature drops below a certain value (1) a heater is turned on (1) until the temperature reaches the desired level/maintained temperature (1) 	[6]	<p>Do not award two marks for stating 'until the temperature reaches the desired level' twice. There may be other ways of heating or cooling a room which are acceptable e.g. open a window.</p> <p>To control the temperature two devices need to be turned on /off.</p>

Question		Max Mark	Rationale
4 (a) (i)	<p>Describe how Harry has set up his spreadsheet in order for the background colour to change when 1.75 or 2.75 is entered into the seating plan.</p> <ul style="list-style-type: none"> • Click on cell / highlight row / highlight column / highlight area. (selecting) • Go to conditional formatting (choosing) (1) • 'If the input is equal to 1.75 or 2.75 / >0 and <3 (correct rule) (2) • partially correct rule (1) • fill grey (correct fill) (1) 	[5]	Note that other spreadsheet software will possibly use a different technique so give benefit to anything which basically goes through the steps of selecting; choosing the appropriate feature; correct rule (2); correct fill.
4 (a) (ii)	<p>Give one way that Harry could overcome this problem.</p> <ul style="list-style-type: none"> • Change the spreadsheet so that a different colour appears when 1.75 or 2.75 (is entered) 	[1]	Change colour TV, need to state different colour
4 (b) (i)	<p>State the most efficient formula that should be entered in cell P5</p> <ul style="list-style-type: none"> • (=) SUM(J5 : O5) (2 marks) • Missing appropriate brackets or colon replaced with e.g. comma (1). • (=) J5 + K5 + L5 + M5 + N5 + O5 (1) 	[2]	Whilst the third bullet point works, it shows a lack of understanding of spreadsheet design and is therefore only worth one mark.
4 (b) (ii)	<p>Describe the most efficient method that Harry can use to enter similar formulas in cells P6 to P9.</p> <ul style="list-style-type: none"> • <u>Click/Select</u> P5 • Drag the black square / replicate (down) / fill down • (Down) to (cell) P9 <p>Or</p> <ul style="list-style-type: none"> • Copy & Paste • Select P5 • Select P6 – P9 	[3]	Typing in a similar formula each time, again shows no understanding of cell replication and therefore is not worth a mark. There may be other methods using different software or indeed the same software for example candidates may use the fill command or keyboard shortcuts. If they do suggest something unusual then if possible test it out and award full marks if it works and is efficient

Question		Max Mark	Rationale
4 (c)	<p>Explain how Harry could make sure that he still has a copy of his spreadsheet, even if his computer breaks down.</p> <ul style="list-style-type: none"> • back up / by saving another copy • onto a portable medium / external storage device • storing in a different location 	[2]	Not USB by itself – needs to at least refer to a device
5 (a) (i)	<p>What is meant by the term hardware? Give one example.</p> <ul style="list-style-type: none"> • Understanding that hardware is the physical equipment, something that you can touch, tangible etc. / a device • An appropriate example e.g. printer, memory stick. 	[2]	Condone cables etc. visible
5 (a) (ii)	<p>What is meant by the term software? Give one example.</p> <ul style="list-style-type: none"> • Understanding that software are the programs/data • An appropriate example e.g. word processor, spreadsheet, firewall, operating system, anti-virus software 	[2]	No trade names accepted

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5 (b)	<p>Place one tick in each row to show whether the item is an input, output, processing or storage device.</p> <table border="1" data-bbox="304 339 1267 691"> <thead> <tr> <th data-bbox="304 339 510 406">Item</th> <th data-bbox="517 339 658 406">Input</th> <th data-bbox="665 339 806 406">Output</th> <th data-bbox="813 339 994 406">Processing</th> <th data-bbox="1001 339 1267 406">Storage / Memory</th> </tr> </thead> <tbody> <tr> <td data-bbox="304 411 510 443">Keyboard</td> <td data-bbox="517 411 658 443">(✓)</td> <td data-bbox="665 411 806 443"></td> <td data-bbox="813 411 994 443"></td> <td data-bbox="1001 411 1267 443"></td> </tr> <tr> <td data-bbox="304 448 510 480">Ink jet printer</td> <td data-bbox="517 448 658 480"></td> <td data-bbox="665 448 806 480">✓</td> <td data-bbox="813 448 994 480"></td> <td data-bbox="1001 448 1267 480"></td> </tr> <tr> <td data-bbox="304 485 510 517">Trackerball</td> <td data-bbox="517 485 658 517">✓</td> <td data-bbox="665 485 806 517"></td> <td data-bbox="813 485 994 517"></td> <td data-bbox="1001 485 1267 517"></td> </tr> <tr> <td data-bbox="304 521 510 553">DVD drive</td> <td data-bbox="517 521 658 553"></td> <td data-bbox="665 521 806 553"></td> <td data-bbox="813 521 994 553"></td> <td data-bbox="1001 521 1267 553">✓</td> </tr> <tr> <td data-bbox="304 558 510 590">ROM</td> <td data-bbox="517 558 658 590"></td> <td data-bbox="665 558 806 590"></td> <td data-bbox="813 558 994 590"></td> <td data-bbox="1001 558 1267 590">✓</td> </tr> <tr> <td data-bbox="304 595 510 627">Monitor</td> <td data-bbox="517 595 658 627"></td> <td data-bbox="665 595 806 627">✓</td> <td data-bbox="813 595 994 627"></td> <td data-bbox="1001 595 1267 627"></td> </tr> <tr> <td data-bbox="304 632 510 663">Mouse</td> <td data-bbox="517 632 658 663">✓</td> <td data-bbox="665 632 806 663"></td> <td data-bbox="813 632 994 663"></td> <td data-bbox="1001 632 1267 663"></td> </tr> <tr> <td data-bbox="304 668 510 700">CPU</td> <td data-bbox="517 668 658 700"></td> <td data-bbox="665 668 806 700"></td> <td data-bbox="813 668 994 700">✓</td> <td data-bbox="1001 668 1267 700"></td> </tr> </tbody> </table>					Item	Input	Output	Processing	Storage / Memory	Keyboard	(✓)				Ink jet printer		✓			Trackerball	✓				DVD drive				✓	ROM				✓	Monitor		✓			Mouse	✓				CPU			✓		[7]	<p>When marking this question it is a good idea to produce a mark 'template' on tracing paper and simply hold this up to the screen. X in a box is also correct.</p>
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6 (a)	<p>Give <u>one</u> benefit and <u>two</u> drawbacks of using email to book tickets.</p> <p><u>Benefits</u> e.g.</p> <ul style="list-style-type: none"> • More convenient - do not need to travel to the youth centre / comfort of own home • Book at anytime • As long as you use a computer for other purposes it is often cheaper to send an email than say driving to the youth centre • More sales (are likely) • <p><u>Drawbacks</u> e.g.</p> <ul style="list-style-type: none"> • The sender does not know if there are any empty seats • The sender cannot choose the seat(s) (1) else the seats could be double/over booked • booked but not purchased • (if response is slow) it is time-consuming to continually check your email/you may send a duplicate request • The email may have been classified as junk and therefore may not have been read 	[3]	<p>Do not award for – An email account is required by both the sender and the recipient (most people have access to email accounts)</p> <p>Do not award for lost</p>

Question		Max Mark	Rationale
6 (b)	<p>Discuss the benefits and drawbacks to the customer and to the organisation of online booking.</p> <p>Instructor</p> <p>Marking this question involves reading the whole question through, noting what is there and placing the response in a band. Marks within a band are awarded depending on the quality of the answer.</p> <p>BANDED RESPONSE MARK SCHEME: This question to be marked as levels of response:</p> <p>Level 3 (8-10 marks)</p> <p>Candidates will address all aspects of the question and discuss the benefits and drawbacks to both customer and organisation. They will provide at least six of the points listed below. The issues raised will be justified. 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 a reasoned conclusion.</p> <p>Level 2 (5-7 marks)</p> <p>Candidates will address all aspects of the question. They will provide at least four of the points listed below including at least one benefit for customer and organisation and one drawback. Some analysis of benefits and drawbacks. 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.</p> <p>Level 1 (0-4 marks)</p> <p>Candidates will only address some aspects of the question, and give basic advantages / disadvantages of the two methods without comparing the two. They may not include examples from both columns.</p>	[10]	

Question		Max Mark	Rationale
	<p>Answers may be simplistic with little or no relevance and may be in the form of a list. There will be little or no use of specialist terms.</p> <p><u>Benefits</u></p> <ul style="list-style-type: none"> • Bookings can be made at home • Alternatives can be proposed if first choice not available • People expect to be able to pay by card • Encourages impulse booking / avoids lost booking opportunity • Reaches a wider customer base • Cashflow improvements (1), card payments usually clear more quickly than other methods (1) • Administration is simpler (1), as a regular statement of card transactions is easier to reconcile (1) • With card payments, the customer's card is checked to see if it is valid • The card is checked to ensure that it has not been reported as lost or stolen (before the purchase is approved) • Services are available 24 hours a day • Bookings are instantaneous so little possibility of overbooking • Improved security (1), less cash held at the venue (1) • The customer's account is checked to ensure the funds are available <p><u>Drawbacks</u></p> <ul style="list-style-type: none"> • There are costs involved (with the Credit / Debit card company) • Increased possibility of fraud. • Must reach a separate agreement with each card company • Train staff (1) in the technical (1) administrative issues (1), fraud prevention measures (1) 		

Question		Max Mark	Rationale
	<ul style="list-style-type: none"> • Must get their details correct • Must have a debit/credit card 		
7 (i)	<p>Do the regulations apply to students using computers in schools? Tick the appropriate box below:</p> <p>No</p>	[1]	
7 (ii)	<p>For each of the following, give two features that make them safer to use.</p> <p><u>chair</u></p> <ul style="list-style-type: none"> • back rests • five legs • adjustable height • arm rests <p><u>keyboard</u></p> <ul style="list-style-type: none"> • ergonomically designed • adjustable height • wrist rest <p><u>screen</u></p> <ul style="list-style-type: none"> • tiltable / swivel screens • anti-glare / screen filter 	[6]	
		[100]	

OCR (Oxford Cambridge and RSA Examinations)
1 Hills Road
Cambridge
CB1 2EU

OCR Customer Contact Centre

14 – 19 Qualifications (General)

Telephone: 01223 553998

Facsimile: 01223 552627

Email: general.qualifications@ocr.org.uk

www.ocr.org.uk

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Head office
Telephone: 01223 552552
Facsimile: 01223 552553

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