

# **Mark Scheme for January 2012**

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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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Question	Answer	Marks	Guidance																					
1 (a)	Answers as shown: <table border="1" style="margin-left: 40px;"> <thead> <tr> <th colspan="2">Hardware component</th> </tr> </thead> <tbody> <tr> <td>A</td> <td>One from: LCD, VDU, monitor, screen</td> </tr> <tr> <td>B</td> <td>speaker(s)</td> </tr> <tr> <td>C</td> <td>keyboard</td> </tr> <tr> <td>D</td> <td>microphone</td> </tr> <tr> <td>E</td> <td>scanner</td> </tr> <tr> <td>F</td> <td>(digital/web) camera</td> </tr> </tbody> </table>	Hardware component		A	One from: LCD, VDU, monitor, screen	B	speaker(s)	C	keyboard	D	microphone	E	scanner	F	(digital/web) camera	6								
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(b)	Ticks as shown: <table border="1" style="margin-left: 40px;"> <thead> <tr> <th>Item</th> <th>Input (✓)</th> <th>Output (✓)</th> </tr> </thead> <tbody> <tr> <td>A</td> <td></td> <td>✓</td> </tr> <tr> <td>B</td> <td></td> <td>✓</td> </tr> <tr> <td>C</td> <td>✓</td> <td></td> </tr> <tr> <td>D</td> <td>✓</td> <td></td> </tr> <tr> <td>E</td> <td>✓</td> <td></td> </tr> <tr> <td>F</td> <td>✓</td> <td></td> </tr> </tbody> </table>	Item	Input (✓)	Output (✓)	A		✓	B		✓	C	✓		D	✓		E	✓		F	✓		6	
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(c)	One from: <ul style="list-style-type: none"> <li>• moving the pointer (around the screen)</li> <li>• selecting from menu</li> <li>• selecting icon/items on screen</li> <li>• selecting from drop down list</li> </ul>	1																						

Question	Answer	Marks	Guidance
(d)	<p>Four from:</p> <p>Internal memory is:</p> <ul style="list-style-type: none"> <li>• RAM <ul style="list-style-type: none"> <li>– holds data/software currently in use</li> <li>– loses data when power is removed</li> </ul> </li> <li>• ROM <ul style="list-style-type: none"> <li>– holds instructions needed for the computer to start/BIOS</li> </ul> </li> <li>• faster to access than backing storage</li> </ul> <p>Backing storage:</p> <ul style="list-style-type: none"> <li>• hard disk/CD/DVD media/external drives/memory sticks</li> <li>• slower than internal memory</li> <li>• stores data when power removed</li> <li>• has higher capacity than internal memory</li> <li>• OS cannot use/deal with very large RAM/internal memory</li> <li>• cost per Gbyte is lower than internal memory</li> </ul> <p>Maximum 3 marks if only internal memory OR backing storage memory</p>	4	
(e) (i)	<p>Two from:</p> <ul style="list-style-type: none"> <li>• in case her files/data are lost</li> <li>• in case her files/data are corrupted/damaged</li> <li>• can restore file/data from backup</li> <li>• second backup in case first is lost</li> </ul>	2	

Question		Answer	Marks	Guidance
	(e) (ii)	One from: <ul style="list-style-type: none"> <li>• removable hard disk</li> <li>• USB memory stick/flash memory</li> <li>• CD-R/RW</li> <li>• DVD-R/RW</li> <li>• Blu-ray disks</li> <li>• online storage</li> <li>• use of mobile phones/media players</li> </ul>	1	Accept any suitable backup devices
	(f)	Three from: <ul style="list-style-type: none"> <li>• do not download files from unknown/suspicious sources/attachments</li> <li>• do not use other person's storage media</li> <li>• install/use anti-virus software</li> <li>• scan incoming/existing files</li> <li>• perform regular (anti-virus) scans</li> <li>• keep anti-virus software updated</li> </ul>	3	

Question		Answer	Marks	Guidance
2	(a)	<p>Six from:</p> <ul style="list-style-type: none"><li>• load images into photo-editing software</li><li>• create new layer over lake image<ul style="list-style-type: none"><li>– for canoe image</li></ul></li><li>• remove background<ul style="list-style-type: none"><li>– around canoe</li></ul></li><li>• create transparent layer<ul style="list-style-type: none"><li>– behind/around canoe</li></ul></li><li>• remove border around canoe image</li><li>• flip canoe image horizontally</li><li>• copy canoe image<ul style="list-style-type: none"><li>– paste canoe image</li><li>– twice</li><li>– move canoe images into new positions</li></ul></li><li>• resize canoe image</li><li>• rotate canoe image</li></ul>	6	

Question			Answer	Marks	Guidance
	(b)	(i)	Two from: <ul style="list-style-type: none"> <li>• better reproduction of colours</li> <li>• can use photo quality/shiny paper</li> <li>• running costs are less</li> <li>• initial purchase price is less so more likely to have inkjet for colour</li> </ul>	2	
	(b)	(ii)	One from: <ul style="list-style-type: none"> <li>• paper is expensive</li> <li>• smaller paper tray capacity/change or add paper more often</li> <li>• ink (cartridges) are expensive</li> <li>• ink cartridges need frequent replacing</li> <li>• inkjets are slower than laser printers</li> </ul>	1	
3			Hardware is: <ul style="list-style-type: none"> <li>• components/devices <ul style="list-style-type: none"> <li>– that can be held/touched/are physical</li> </ul> </li> </ul> Software is: <ul style="list-style-type: none"> <li>• code/instructions/programs <ul style="list-style-type: none"> <li>– that tell the computer how to operate</li> </ul> </li> </ul> <p>Allow max one mark for appropriate example of either hardware or software.</p>	4	The second mark is for the description
4	(a)	(i)	<ul style="list-style-type: none"> <li>• multiplies/times</li> <li>• contents of/values in cells (C5 with D5)/£9-95 by 23 (to get £228.85)</li> <li>• displays/gives the result of the calculation (in E5)/working out the takings for couscous salad</li> </ul>	2	

Question		Answer	Marks	Guidance
	(a) (ii)	<p>A suitable formula must calculate the total cost of making the item and subtract this from the total income from sales for that item. Suitable formulas include:</p> <p>=E8-(B8*D8) or =E8-(D8*B8)</p> <p>=(C8*D8)-(B8*D8) or with the cells in brackets in the reverse order eg D8*C8 etc. In the above, the brackets are optional.</p> <p>=(C8-B8)*D8 =D8*(C8-B8)</p> <p>2 marks for an all correct formula 1 mark removed for each error in the formula.</p>	2	
	(b) (i)	<ul style="list-style-type: none"> <li>• shows a minus value</li> <li>• (as shown in) cell F30/for the value - £78.86</li> </ul>	2	
	(b) (ii)	<p>Four from</p> <ul style="list-style-type: none"> <li>• select/highlight <ul style="list-style-type: none"> <li>– correct cell selected eg cell F30</li> <li>– change font type/size/colour/underline/bold/italic</li> <li>– use a cell border</li> </ul> </li> <li>• use conditional formatting <ul style="list-style-type: none"> <li>– to change cell colour if loss/profit</li> <li>– using a function/formula</li> </ul> </li> <li>• select correct options for negative numbers</li> <li>• ensure cell format set to currency</li> <li>• embolden/underline cell with label (E30)</li> </ul>	4	



Question	Answer	Marks	Guidance
(c)	<ul style="list-style-type: none"> <li>• reduce the number of staff               <ul style="list-style-type: none"> <li>– reduce the value in cell D28</li> </ul> </li> <li>• reduce staff wages               <ul style="list-style-type: none"> <li>– reduce the value in cell C28</li> </ul> </li> <li>• reduce cost of making the item(s)               <ul style="list-style-type: none"> <li>– reduce the values in B8 to B17</li> </ul> </li> <li>• reduce the amount of electricity, gas, water etc               <ul style="list-style-type: none"> <li>– reduce the value in cell E26</li> </ul> </li> <li>• increase the selling price of each/all item(s)               <ul style="list-style-type: none"> <li>– increase the values in one/all of cells C8 to C17</li> </ul> </li> <li>• increase the number of items sold               <ul style="list-style-type: none"> <li>– increase the values in one/all of cells D8 to D17</li> </ul> </li> <li>• use goal seek               <ul style="list-style-type: none"> <li>– to find values that do not produce a loss (Note: eg 20 staff instead of 22 will produce a £0 value in F30...anything less than 20 produces a profit)</li> </ul> </li> <li>• change values on the spreadsheet               <ul style="list-style-type: none"> <li>– to see the effect on profit/loss</li> <li>– which would automatically change</li> </ul> </li> </ul> <p>1 mark for the point, 1 mark for expansion Max (8)</p>	8	

Question		Answer				Marks	Guidance
5	(a)	<b>Field Name</b>	<b>Example data</b>	<b>Data type</b>	<b>Reason for data type</b>	6	
		<i>Product description</i>	<i>18cm spade</i>	text/ alphanumeric	any character allowed		
		<i>Number in stock</i>	<i>14</i>	Integer/ numeric	<ul style="list-style-type: none"> <li>allow (whole) numbers only</li> <li>can be sorted</li> </ul>		
		<i>Price</i>	<i>£8.34</i>	<ul style="list-style-type: none"> <li>currency</li> <li>real number</li> </ul>	<ul style="list-style-type: none"> <li>need to show currency symbols</li> <li>values have decimal places.</li> </ul>		
<b>Total</b>					<b>60</b>		

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