

# Mark Scheme (Results)

## Summer 2010

IGCSE

### IGCSE Information and Communication Technology

#### (4385) Paper 1F

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## General Marking Guidance

- All candidates must receive the same treatment. Examiners must mark the first candidate in exactly the same way as they mark the last.
- Mark schemes should be applied positively. Candidates must be rewarded for what they have shown they can do rather than penalised for omissions.
- Examiners should mark according to the mark scheme not according to their perception of where the grade boundaries may lie.
- There is no ceiling on achievement. All marks on the mark scheme should be used appropriately.
- All the marks on the mark scheme are designed to be awarded. Examiners should always award full marks if deserved, i.e. if the answer matches the mark scheme. Examiners should also be prepared to award zero marks if the candidate's response is not worthy of credit according to the mark scheme.
- Where some judgement is required, mark schemes will provide the principles by which marks will be awarded and exemplification may be limited.
- When examiners are in doubt regarding the application of the mark scheme to a candidate's response, the team leader must be consulted.
- Crossed out work should be marked UNLESS the candidate has replaced it with an alternative response.

Question Number	Answer	Mark
1a		(5)
Type check		Rejects data items with more than a set number of characters
Format check		Rejects data items where the data type is not the same as a set type
Length check		Rejects data items that do not match a particular pattern
Check digit		Rejects data items that have been left blank
Presence check		Rejects data items where a calculation using the data does not give the final digit of the data as a result
Range check		Rejects data items that are larger or smaller than set values
1 mark for each correct line		

Question Number	Answer	Mark
1(b)	Proof reading / double entry / any sensible description	(1)

Question Number	Answer	Mark
2		(1)

<i>Task</i>	<i>Label</i>
Advertise a computer game using text, graphics, sound, and video	G
Store and search the personal details of all the students in a school	A
Make a brochure to advertise a new housing development	D
Repair damage on an old photograph	F
Calculate pay and print pay slips	B
Produce a template for a business letter	C
Create an interactive screen to let people send messages to each other	E

Question Number	Answer	Mark
3(a)	<p>Product code 1 mark</p> <p>any 2 of:  price may change  product name is multi-part  code is short / fixed length so easy to validate</p> <p>1 mark each to a maximum of 2 marks.</p> <p>NOT, it is unique.</p>	(3)

Question Number	Answer	Mark
3(b)	<p>answers may include:</p> <p>add            stocking a new type of paper            1 mark  delete        no longer selling a type of paper        1 mark  amend        changing the price / other plausible field 1 mark</p>	(3)

Question Number	Answer	Mark
3(c)		(6)

Field name	Data type	Field length
Product name	text / character / alpha-numeric	18 to 25
Product code	text / character / alpha-numeric	6
Price	currency	4 to 6

1 mark for each correct type  
1 mark for each correct length

Question Number	Answer	Mark
4 (a)	Any of B12 to G12  1 mark.	(1)

Question Number	Answer	Mark
4 (b)	Any of B10 to G10 or H12  1 mark.	(1)

Question Number	Answer	Mark									
4 (c)	<table border="0"> <tr> <td>cell B6</td> <td>number</td> <td>1 mark</td> </tr> <tr> <td>cell C11</td> <td>currency</td> <td>1 mark</td> </tr> <tr> <td>cell E2</td> <td>text</td> <td>1 mark</td> </tr> </table>	cell B6	number	1 mark	cell C11	currency	1 mark	cell E2	text	1 mark	(3)
cell B6	number	1 mark									
cell C11	currency	1 mark									
cell E2	text	1 mark									

Question Number	Answer	Mark
4 (d)(i)	<p style="text-align: center;">MAX / MAXIMUM</p> <p style="text-align: center;">1 mark</p>	(1)

Question Number	Answer	Mark
4 (d)(ii)	<p style="text-align: center;">B10 to G10 / row 10</p> <p style="text-align: center;">1 mark</p>	(1)

Question Number	Answer	Mark
4 (e)	<p>Look for the following ideas:</p> <p>For 1 mark    Select rows 10, 11 and 12, CUT and paste to row 11 or higher</p> <p>or</p> <p>For 2 marks    Select A10 to H12 CUT and paste to A11 or higher</p> <p>or</p> <p>For 3 marks    Select A10 to H12 CUT and paste to A11 or higher Check and correct formulae</p> <p>or</p> <p>For 3 marks    Select any of rows 3 - 9 / select row 3/4/5/etc. Insert 1 or more rows</p>	(3)

Question Number	Answer	Mark
5 (a)(i)	a single binary digit / 1 or 0 1 mark	(1)

Question Number	Answer	Mark
5 (a)(ii)	8 bits 1 mark	(1)

Question Number	Answer	Mark
5 (b)	255 OR 256 1 mark	(1)

Question Number	Answer	Mark
5 (c)	1024 bytes 1 mark	(1)

Question Number	Answer	Mark
5 (d)(i)	Anything sensible about reducing the required storage space 1 mark	(1)

Question Number	Answer	Mark
5 (d)(ii)	mpeg / jpg / DiVX / any plausible compressed file type. 1 mark	(1)



Question Number	Answer	Mark
6 (a)	<p>switch / hub network card / NIC</p> <p>NOT cable</p> <p>2 marks</p>	(2)

Question Number	Answer	Mark
6 (b)	<p>WAN uses telecommunications / external links 1 mark</p> <p>LAN is self contained / uses own media 1 mark</p>	(2)

Question Number	Answer	Mark
6 (c)(i)	<p>look for the ideas: Save the cost of hardware / cables / switch / server Cheaper installation because less labour</p> <p>2 marks</p>	(2)

Question Number	Answer	Mark
6 (c)(ii)	<p>Answers may include:</p> <p>Cost of extra peripherals / printers / Internet links Cost of software / no network licensed software Extra admin costs no centralised backup no remote help other sensible admin problem Cost associated with having to transfer data by e.g. CD / flash drive</p> <p>Any sensible extra cost 1 mark each to a maximum of 2 marks</p>	(2)

Question Number	Answer	Mark
6 (d)(i)	<p>answers may include: must be logged in locally to get at the files cannot be attacked through the network</p> <p>1 mark</p>	(1)

Question Number	Answer	Mark
6 (d)(ii)	<p>answers may include: centralised security can be imposed access levels from network</p> <p>1 mark</p>	(1)

Question Number	Answer	Mark
7 (a)	<p>NOTE. Maximum of 6 marks if the form has space for written entries, e.g. signature</p> <p>1 mark for each of:</p> <ul style="list-style-type: none"> <li>• name</li> <li>• email address</li> <li>• password and confirm password</li> <li>• any two payment method fields e.g. type of payment, credit / debit card type / use paypal , google checkout or similar card number / account name expiry date / valid from date</li> </ul> <p style="text-align: center;">To a maximum of 4 marks</p> <ul style="list-style-type: none"> <li>• form title</li> <li>• company name / logo</li> <li>• submit details method</li> <li>• cancel method</li> <li>• method of leaving the page eg back button</li> <li>• on screen instructions for the user</li> </ul> <p style="text-align: center;">To a maximum of 4 marks</p>	(8)

Question Number	Answer	Mark
7 (b)(i)	<p>Look for the ideas:</p> <p>Security measure to prevent others using the account / fraud / identity theft</p> <p>To speed up entry to the site next time</p> <p style="text-align: center;">1 mark</p>	(1)

Question Number	Answer	Mark
7 (b)(ii)	<p>Look for the ideas:</p> <p>Password may be **** so need to check it is what the person thought it was</p> <p>In case of typo on first password</p> <p style="text-align: center;">1 mark</p>	(1)

Question Number	Answer	Mark
8 (a)(i)	fibre-optic 1 mark	(1)

Question Number	Answer	Mark
8 (a)(ii)	fibre-optic 1 mark	(1)

Question Number	Answer	Mark
8 (a)(iii)	WiFi 1 mark	(1)

Question Number	Answer	Mark
8 (b)	<p>Answers may include:</p> <ul style="list-style-type: none"> <li>Web hosting</li> <li>sale of domain names / web site names</li> <li>news groups</li> <li>news / weather</li> <li>chat rooms</li> <li>messaging service / sms</li> <li>any reasonable Internet based service</li> </ul> <p>1 mark each to a maximum of 3</p>	(3)

Question Number	Answer	Mark
8 (c)	<p>Look for the ideas:</p> <ul style="list-style-type: none"> <li>• router may have built in firewall / filter other reasonable add on, describes what firewall / filter does.</li> <li>• router knows which computer incoming messages / data should go to, keeps data for each computer separate</li> <li>• router holds names / numbers / ID of each computer in the network, can allocate IDs / DHCP, can keep data for each computer separate</li> </ul> <p>2 x 1 mark</p>	(2)

Question Number	Answer	Mark
9 (a)	<p>Factors are:</p> <p>frequency of backup e.g. every day / hourly, so only lose small amount of changes</p> <p>choice of media e.g. DVD / network drive, big enough for 100 Mb</p> <p>storage of backup media e.g. on-line / fireproof safe, for quick recovery / secure</p> <p>timings e.g. overnight / after close of business, no disruption to work</p> <p>1 mark for each factor 1 mark for each explanation</p> <p style="text-align: center;">To a maximum of 6 marks.</p>	(6)

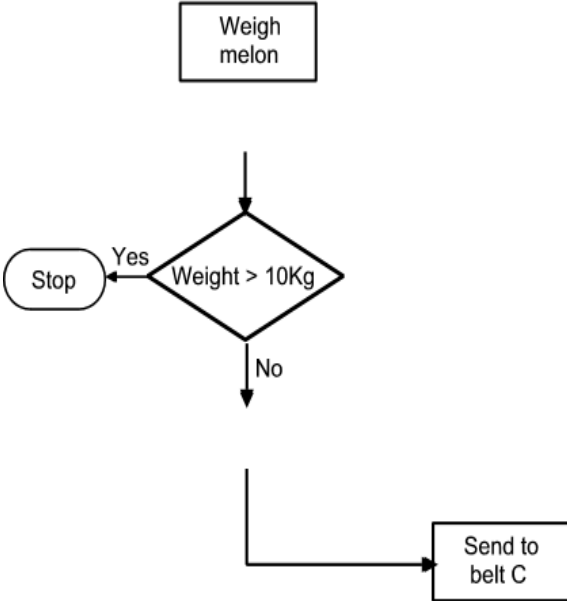
Question Number	Answer	Mark
9 (b)(i)	<p>Answers may include:</p> <p>Logon / user names. Only authorised can logon to (database) system</p> <p>Access levels. Only authorised groups (access level) can see records</p> <p>Password / encryption on database / records, only authorised know the password</p> <p>1 mark for method 1 mark for explanation</p> <p style="text-align: center;">2 x 2 marks</p>	(4)

Question Number	Answer	Mark
9 (b)(ii)	<p>Answers may include:</p> <p>Firewall, prevents outsiders seeing / entering the network</p> <p>Anti virus, prevents trojans allowing unauthorised entry / sending data out</p> <p>1 mark for method 1 mark for explanation</p> <p style="text-align: center;">2 marks</p>	(2)



Question Number	Answer	Mark
11(a)	<p>In any order. 1 mark for a weight <b>and</b> reason.</p> <p>Weight 1      less than 1Kg, typical data for belt A  Weight 2      1Kg / 0.999 Kg, extreme data for A - B  Weight 3      over 1 Kg and less than 2 Kg, typical data for belt B  Weight 4      2Kg / 1.999Kg, extreme data for B - C  Weight 5      over 2Kg, typical data for belt C</p> <p style="text-align: center;">5 marks.</p>	(5)

Question Number	Answer	Mark
11 (b)	<p>Look for the ideas:</p> <p style="padding-left: 40px;">Lower limit is 0Kg, i.e no melon / cannot have negative melons.  No upper limit to scales / all melons over 2Kg are C / melons  don't grow too big for the machine to handle.</p> <p style="text-align: center;">1 mark for lower limit  1 mark for upper limit</p>	(2)

Question Number	Answer	Mark
11 (c)	<p>positioned between weigh and send to belt C positioned anywhere else</p> <p>Look for:  weight &gt; 10Kg            1 mark  Yes = Stop                1 mark  No = Continue            1 mark</p>  <pre> graph TD     A[Weigh melon] --&gt; B{Weight &gt; 10Kg}     B -- Yes --&gt; C([Stop])     B -- No --&gt; D[Send to belt C] </pre>	<p>Max 3 marks Max 2 marks</p> <p>(3)</p>

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