



**General Certificate of Secondary Education  
June 2010**

**Information and Communication Technology  
3527 Short Course**

**Specification A**

**3527/H Higher Tier**

**Final**

***Mark Scheme***

Mark schemes are prepared by the Principal Examiner and considered, together with the relevant questions, by a panel of subject teachers. This mark scheme includes any amendments made at the standardisation meeting attended by all examiners and is the scheme which was used by them in this examination. The standardisation meeting ensures that the mark scheme covers the candidates' responses to questions and that every examiner understands and applies it in the same correct way. As preparation for the standardisation meeting each examiner analyses a number of candidates' scripts: alternative answers not already covered by the mark scheme are discussed at the meeting and legislated for. If, after this meeting, examiners encounter unusual answers which have not been discussed at the meeting they are required to refer these to the Principal Examiner.

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1	(a)	(i)	Keyboard		<b>Correct answer only</b>	1
1	(a)	(ii)	F (Scanner)		<b>Correct answer only</b>	1
1	(a)	(iii)	graphics digitiser OCR OMR  bar code reader touch screens/pad	concept Keyboard light Pen mouse/rollerball  sensor microphone	MICR digital camera/webcam joystick/games controller graphics tablet wand	<b>Any 1 x1</b> 1
1	(b)	(i)	Printer		<b>Correct answer only</b>	1
1	(b)	(ii)	E (Monitor)		<b>Correct answer only</b>	1
1	(b)	(iii)	plotter motor/robot arm lights	actuator/relay speaker/headphones	<b>Any 1 x 1 mark</b>	1
1	(c)		D (DVD drive)		<b>Correct answer only</b>	1
2	(a)	(i)	Heat sensor / thermistor/ temperature sensor <b>Not thermometer</b>		<b>Correct answer only</b>	1
2	(a)	(ii)	Any <b>average</b> reading across the sensors may be best One might get <b>broken/backup</b> <b>Conditions may vary</b> across the island (and give unrepresentative values) <b>Large area</b> to cover with only one sensor <b>Compare</b> readings to identify errors		<b>Any 1 x 1 mark</b>	1
2	(b)	(i)	B (logging interval)		<b>Correct answer only</b>	1
2	(b)	(ii)	A (Calibrate)		<b>Correct answer only</b>	1
2	(b)	(iii)	C (Period of logging)		<b>Correct answer only</b>	1
2	(c)		Can operate 24/7 efficiently Do not have to go out in “bad” weather Readings would be more accurate/no human error Can be taken at very short intervals if needed Would not have to waste time travelling to the island/safer than travelling/cheaper than travelling Cheaper than employing a person		<b>Any 2 x 1 mark</b>	2
3	(a)		Line spacing Centre		<b>Correct answer only</b> <b>Correct answer only</b>	1 1
3	(b)		Spell checker Grammar checker <b>Both words needed (not just “spelling”)</b>		<b>Any 1 x 1 mark</b>	1

3	(c)	<p><b>Select/Highlight</b> the fourth row and <b>cut</b> out this row  <b>Allow copy instead of cut only if followed by delete</b></p> <p>Position the cursor at the <b>end</b> of the flyer and <b>paste</b> in line four</p> <p>Or CTRL X          CTRL V</p> <p><b>Key words in bold</b></p>	1
			1
			3
3	(d)	<p>(i)</p> <ul style="list-style-type: none"> <li>• Form must be readable</li> <li>• Return information i.e. return address/contact info/address Sport Centre</li> <li>• Help information – in case of problems completing</li> <li>• Enough space for answers / member details/number of boxes</li> <li>• Easy to complete/user friendly/clear where answers go</li> <li>• Choice of field names/collects relevant info/appropriate questions asked</li> <li>• Order of field names</li> <li>• DPA statement</li> </ul> <p style="text-align: right;"><b>Any 3 x 1 mark</b></p>	3
3	(d)	<p>(ii)</p> <p>Membership Number or equivalent          Fax number          E-mail address          Photo          Date of membership/expiry of membership          Identification given          DOB          Classes / interests / activities planned          Signature          Marketing opt out          Gender</p> <p style="text-align: right;"><b>Any 2 x 1 mark</b></p>	2
4	(a)	(i) B	<p><b>Correct answer only</b></p> <p>1</p>
	(a)	(ii) D	<p><b>Correct answer only</b></p> <p>1</p>
	(a)	(iii) A	<p><b>Correct answer only</b></p> <p>1</p>
	(a)	(iv) C	<p><b>Correct answer only</b></p> <p>1</p>
4	(b)	<p>Evaluation          Feasibility          Monitoring</p> <p>Maintenance          Documentation          User Guide</p> <p style="text-align: right;"><b>Any 1 x 1 mark</b></p>	1
5	(a)	(i) Copyright	<p><b>Correct answer only</b></p> <p>1</p>

5	(a)	(ii)	<p>If 5a (i) not copyright 5a (ii) cannot be awarded marks</p> <p>Bought an extra licence Not taken the software home Take the computer home Only install software on 4 computers at office</p> <p style="text-align: right;"><b>Any 1 x 1 mark</b></p>	1
5	(b)	(i)	<p><b>What</b> People who gain <b>unauthorised / illegal</b> access to other peoples' computer system (access is usually remote)</p> <p><b>Why</b> To gain access to <b>copy / damage / corrupt / add virus / delete / look at / fraud</b></p>	1 1
5	(b)	(ii)	<p><b>Software</b>/is a <b>program</b> <b>Replicates</b> itself (may) <b>cause problems/damage</b> to other software or systems</p> <p style="text-align: right;"><b>Any 2 x 1 mark</b></p>	2
5	(c)		<p>Describe possible health and safety issues associated with the staff at the library using computers for long periods of time. <b>1 mark is to be given for each relevant issue.</b></p> <p><b>Health issues</b> Back/Neck pain/problems Headaches Eye strain Stress Wrist problems/Carpel Tunnel Syndrome/RSI(finger problems) Possible radiation from monitor/wifi Possible epilepsy from monitor Overheating of the room</p> <p><b>Safety issues</b> Trailing wires Electrical faults Overload sockets/supply</p> <p style="text-align: right;"><b>Any 4 x 1 mark</b></p>	4
6	(a)		<p><b>C4</b> <span style="float: right;"><b>Correct answer only</b></span></p>	1
6	(b)		<p>(=)sum(C3:C11) – allow C12 or C13 instead of C11      allow C2 instead of C3</p> <p>(=)C3+C4+C5+C6+C7+C8+C9+C10+C11 allow +C11+C12+C2</p> <p style="text-align: right;"><b>Any 1 x 1 mark</b></p>	1
6	(c)		<p>=C3*3+D3 <span style="float: right;"><b>Correct answer only</b></span></p>	1
6	(d)		<p>Select/Click in <b>F3</b>/cell containing the formula</p> <p><b>Replicate</b> the formulae down /<b>drag down the bottom right hand corner</b> to cell F11</p> <p>Allow VALID copy and paste answer</p>	1 1

6	(e)	Click on the word Help or '?' on the top of the spreadsheet / press F1		1
		<b>Type in formulae/formula</b> and select one of the options given		1
6	(f)	E-mails will usually arrive faster	<b>Correct answer only</b>	1
		E-mails will be cheaper to send	<b>Correct answer only</b>	1
7	(a)	(i) Random Access Memory	<b>Correct answer only</b>	1
7	(a)	(ii) RAM is volatile memory	<b>Correct answer only</b>	1
7	(b)	(i) Has <b>no meaning</b> in itself, because it has no context/or example		1
7	(b)	(ii) Information definition or clear example (1) Comparison with data/example (1)		
		Information = data + context/meaning		2
7	(c)	(i) Information should be kept accurate and up to date	<b>Correct answer only</b>	1
		Information should be relevant and not excessive for the purpose	<b>Correct answer only</b>	1
		Information should be kept secure	<b>Correct answer only</b>	1
7	(c)	(ii) <ul style="list-style-type: none"> <li>• Process data fairly/lawfully</li> <li>• Obtain data fairly/lawfully</li> <li>• Destroy data when no longer needed/not kept longer than needed</li> <li>• Only use for registered purpose</li> <li>• Allow customers to see data on request/ process within the rights of the data subjects</li> <li>• Data must not be transferred to countries outside EEC/EU/Europe/countries without adequate DP legislation</li> <li>• Register with Data Protection registrar/commissionaire</li> </ul>	<b>Any 1 x 1 mark</b>	1
7	(d)	The right to see or be sent a copy of the data held about them	<b>Correct answer only</b>	1
		The right to seek compensation for damage caused by the use of inaccurate data	<b>Correct answer only</b>	1
8	(a)	(i) Selling Price (£) for DVD recorder/DV061 is 7229.99/too high		1
8	(a)	(ii) The value is much too high or equivalent for a DVD recorder / compared to other items		1
8	(a)	(iii) Used a range check / checked the field entry is not too high / not above a given value(e.g. 100.00)		1
		Error message / Signalled error / cannot proceed until a suitable entry is made into the field.		1

8	(b)	(i)	FG123 TV459 <b>Ignore grammar and punctuation or multiple lines</b>	<b>Correct answer only</b>	1
8	(b)	(ii)	TV781 WM314 <b>Ignore grammar and punctuation or multiple lines</b>	<b>Correct answer only</b>	1
8	(b)	(iii)	FZ034 Freezer FG156 Fridge TV517 Television <b>Not “TV” or “Telly” but ignore minor spelling mistakes</b>	<b>Correct answer only</b>	1
8	(c)	(i)	<b>List Product Code When Product Name Equals DVD player (Ignore missing capital letters)</b>	<b>Correct answer only</b>	1
8	(c)	(ii)	<b>List Product Code, Product Name When</b>	<b>Correct answer only</b>	1
			Selling price (£) <b>Greater than 200</b>	<b>Correct answer only</b>	1
			<b>And Selling price (£) Less than 500</b>	<b>Correct answer only</b>	1
			<b>(Ignore missing capital letters)</b>		
8	(d)		Faster to search (NOT easier) Faster to sort/sort on multiple fields Neater/faster/easier to edit/update Takes up less space Backup data Less chance of losing/misplacing records on a computer Faster/neater to graph data Access from outside electrical superstore Faster/more attractive generation of reports Access by several people at one time Export to other applications More secure because .....	<b>NOT easy to use (0)</b>	<b>Any 2 x 1 mark each</b>
					2

- 9 (a) Describe possible **advantages** of using the Internet for the research rather than paper-based sources. A range of possible answers are given below.

Advantages OF INTERNET (not just computer)

- Vast amount of information available
- Can ask experts questions on-line
- Information from all over the world/wider range of sources
- Faster access to range of info/faster to search
- Latest information is out there / more up to date
- Can access university / websites
- Access can continue elsewhere / some books cannot be taken out of the library .....
- Video and sound clips available
- Anytime / 24/7

4

**Any 4 x 1 mark**

- 9 (b) Describe possible **disadvantages** of using the Internet for the research rather than paper-based sources.

Disadvantages of Internet (not computers/databases)

- Possible bias
- Not policed – dangerous stuff out there
- Information not always checked! Is it reliable/accurate?
- Can be out of date
- Can waste time just surfing the net
- ISP can cost money/cost of the phone use on all day/access to hardware/internet
- Virus issues/spyware/malware
- Hacking issues

4

NOT training

**Any 4 x 1 mark**