



## **General Certificate of Secondary Education**

# **Information and Communication Technology 3528 Short Course *Specification B***

**3528/H      Higher Tier**

## **Mark Scheme**

*2008 examination - June series*

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.

It must be stressed that a mark scheme is a working document, in many cases further developed and expanded on the basis of candidates' reactions to a particular paper. Assumptions about future mark schemes on the basis of one year's document should be avoided; whilst the guiding principles of assessment remain constant, details will change, depending on the content of a particular examination paper.

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1	(a)	(i)	This point Centred	1 mark
1	(a)	(ii)	Any reasonable Locate the cursor in the paragraph to be indented + Select 'increase indent button in the toolbar' – must distinguish between increase and decrease indent, 1+1 Locate the cursor in the paragraph to be indented + in the ruler drag the indent tab, 1+1 Highlight the paragraph to be indented + press the tab key, 1+1 NOT use the tab key by itself NOT use the space bar	2 marks
1	(b)	(i)	Any reasonable, for example Select the object + drag a handle, 1+1m Highlight the text + choose a larger font, 1+1m	2 marks
1	(b)	(ii)	Any reasonable, for example Copy or cut the logo + paste + reposition + repeat process, reposition 1+1+1+1 NOT: tile	3 marks
				<b>Total</b> 8 marks
2	(a)	(i)	This point One of: B, D, E	1 mark
2	(a)	(ii)	This point One of: A, C	1 mark
2	(a)	(iii)	This point One of: H, I, L	1 mark
2	(b)	(i)	This point J	1 mark
2	(b)	(ii)	This point K	1 mark
2	(c)		Any reasonable, for example Upgrade the contract with the ISP so the broadband speed is increased Increase the amount of RAM memory Upgrade the device with the slowest transmission speed of: the Wireless Access Point, router or modem Get rid of malicious programs that can slow down Internet access, e.g. spyware NOT: Use a virus scanner, etc. without qualification NOT: Do not allow other computers to access the Internet – not practical in context NOT: Move nearer to the wireless access point – not practical in context	2 marks
				<b>Total</b> 7 marks

3	(a)	(i)	This point A formula – allow misspellings	1 mark
3	(a)	(ii)	This point Currency – allow misspellings	1 mark
3	(b)		These points Format is sum(x:x), ignore the = on LHS, 1m Range is D4:D8, D3:D8, D4:D9 or D3:D9 – ignore the colon or separator, 1m D4+D5+D6+D7+D8, ignore = on LHS, 1m	2 marks
3	(c)	(i)	This point One of D6, D10, 1m	1 mark
3	(c)	(ii)	Any reasonable The cell contains a formula, 1m The formula refers to the cell that has been edited, 1m	2 marks
			<b>Total</b>	7 marks
4	(a)	(i)	These points <b>MemberNumber</b> is the key field The key field must be unique	2 marks
4	(a)	(ii)	Any reasonable Not 2015, 0365, 0112, 8231 Must be four digits long	1 mark
4	(b)		These points Title or explanation of reason for collecting data or explains how to complete form or entry, 1m max Asks for Name and Instrument, 1m Asks for other reasonable field e.g. telephone number, address, gender, e-mail address, date of birth, experience, 1m max NOT: Age Uses character boxes, 1m Uses tick boxes, 1m Uses any other method that facilitates input to a computer, 1m Questionnaire is signed and dated, 1m	4 marks
			<b>Total</b>	7 marks

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5	(a) (i)	This point Sensors – allow misspellings	1 mark
5	(a) (ii)	This point Actuators – allow misspellings	1 mark
5	(b)	These points Description is in context, 1m Sensing and reaction, 1m Feedback is cyclical, 1m	3 marks
5	(c)	Any reasonable advantage to the garden centre, for example The growing conditions are always the best The greenhouse is monitored all day every day There is less wastage of water and heating than with manual systems Fewer employees are needed and this reduces the cost of wages  Any reasonable disadvantage to the garden centre, for example Set up costs are high There may be other important factors in plant growth, such as shade, that the computer cannot control in this set up. Fewer people are employed which may reduce the garden centre’s capability to respond to unusual events, such as a very large number of customers Someone else will be needed to look after the plants if the computer breaks down	3 marks  max 2 adv and max 2 disadv
			<b>Total 8 marks</b>

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6	(a) (i)	<p>This point One person enters the data from the questionnaire; another person enters the data from the same questionnaire; the computer checks that both people have entered the same data</p>	1 mark
6	(a) (ii)	<p>Any reasonable, for example The person entering the data looks to see that what is written on the questionnaire is the same as the data displayed on the screen</p>	1 mark
6	(a) (iii)	<p>This point To make sure that the data entered into the computer is the same as the data on the questionnaire NOT: To make sure the data is correct</p>	1 mark
6	(b) (i)	<p>These points Enter the number 12 and this is rejected Enter the number 0 and this is accepted</p>	2 marks
6	(b) (ii)	<p>Any reasonable, 0 to 10 accepted; others rejected, for example 4, accepted; 10 accepted; 11 rejected, -3 rejected; 1m NOT an answer from (b)i, answers testing B, -6, 15, 12, 0</p>	1 mark
6	(c) (i)	<p>This point The computer has been switched on at the processor box</p>	1 mark
6	(c) (ii)	<p>Any reasonable, for example The screen has been switched on All the cables are firmly plugged into the correct sockets</p>	1 mark
<b>Total</b>			8 marks
7	(a)	<p>Any reasonable All instructions in correct syntax, 1m Correct sequence in 6 instructions, e.g. F2 L90 F2 R90 U3 Push, 3m Correct sequence in more than 6 instructions, 2m If not a correct sequence then max 2m L90 followed by R90, 1m Uses F2 twice only, 1m U3 followed by Push, 1m</p>	3 marks
7	(b) (i)	<p>Any reasonable, for example F2 L90 F3 L90 This instruction should be R90 U5 Push Because the fork lift is facing in the wrong direction</p>	1 mark
7	(b) (ii)	<p>Any reasonable, for example</p>	1 mark

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	It is dumped on the floor of the warehouse	
7	(c)	3 marks
	Any reasonable advantage for the warehouse owner, for example Computer controlled fork lift trucks can work 24/7 Down time due to breakdown is likely to cost less than employees' absence, sickness and welfare	max 2 adv and max 2 disadv
	Any reasonable disadvantage for the warehouse owner, for example Computer controlled fork lift trucks will be more expensive to buy and set up to work in the warehouse than those operated by people Computer controlled fork lifts cannot respond to unusual situations as flexibly as people Truck always obeys instructions even if these are incorrect, so goods may get put in the wrong bays	
	Any reasonable advantage for employees, for example Less risk of accident as the need for people to stack high shelves is reduced The job might be cleaner for the remaining employees as the jobs that are left are mainly office jobs More highly skilled workers needed so pay increases	
	Any reasonable disadvantage for employees, for example There are fewer jobs in the warehouse Fewer workers needed so pay reduced Warehouse workers will need ICT skills Truck always may not respond to obstructions so employees may be injured People in other warehouses may have to work longer for less money to compete with warehouses that use computer controlled fork lift trucks	
	Any reasonable advantage for customers, for example More efficient working practices can lead to reduced prices Goods may be handled more carefully so there is less damage Faster to handle goods so less waiting	
	Any reasonable disadvantage for customers, for example A power cut or breakdown could be more widespread and lead to unavailability of products	

**Total** 8 marks

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- 8 (a) These points 2 marks  
 Employees are quickly deskilled  
 A large quantity of old ICT hardware needs to be disposed of
- 8 (b) Any reasonable advantage, for example 5 marks  
 Children can develop the skills needed to modernise their own country max 3 adv  
 Children can use educational software which will help them learn and max 3  
 ICT hardware (NOT: software) is used for longer before it is thrown out disadv  
 Disposing of unwanted hardware by charitable donation costs the business less  
 than paying for recycling  
 Commitment of business to recycling, etc. may attract customers  
 Allow: Developing countries get free software
- Any reasonable disadvantage, for example  
 The ICT hardware may not be useable because schools in developing countries  
 may not have an adequate electricity supply  
 Money spent on transporting old ICT hardware may be better spent on  
 providing a clean water supply  
 ICT skills may not be useful to children in developing countries as there are few  
 local jobs that require these skills  
 Developing countries may not have the facilities to recycle old computer  
 hardware  
 Hardware and software may have a resale value which is forfeited if these are  
 given away  
 Transporting old computers to developing countries is in itself polluting  
 NOT: The developing countries might not know how to use the computers and  
 have to pay for training

**Total** 7 marks