



## General Certificate of Secondary Education

# Information and Communication Technology 3522 *Specification B*

*3522/H Full Course Higher Tier*

## Mark Scheme

*2006 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.

## 3522/H - Higher Tier Written Paper

1.												
a.												
i)	Any reasonable, for example: Highlight 2 of the 't's + cut/delete, 1+1 Right click on the error + select the correct spelling, 1+1 Position the cursor to the left of the 't's + press the delete key 2 times NOT do a spelling check	2 marks										
ii)	Any reasonable, for example: Put each feature on a new line Use bullets Indent Must be layout features; NOT style, font, font size, colour	2 marks										
b.	These points in this order. Save – allow upper case and lower case combinations and misspellings CD-R – allow CDR and lower case	2 marks										
c.												
i)	These points. All in order, 2m 3 in order, 1m Correct order is: <table border="1" data-bbox="260 1039 999 1285"> <thead> <tr> <th>Label</th> <th>Operation</th> </tr> </thead> <tbody> <tr> <td>B</td> <td>Highlight the bar chart in the spreadsheet</td> </tr> <tr> <td>D</td> <td>Copy the bar chart</td> </tr> <tr> <td>C</td> <td>Position the cursor in the word processor document</td> </tr> <tr> <td>A</td> <td>Paste the bar chart</td> </tr> </tbody> </table>	Label	Operation	B	Highlight the bar chart in the spreadsheet	D	Copy the bar chart	C	Position the cursor in the word processor document	A	Paste the bar chart	2 marks
Label	Operation											
B	Highlight the bar chart in the spreadsheet											
D	Copy the bar chart											
C	Position the cursor in the word processor document											
A	Paste the bar chart											
ii)	Any reasonable similarity, for example: The highlighted text appears at the insertion point after paste  Any reasonable difference, for example: The highlighted text disappears when cut, but when copy is used it does not disappear, 1+1m	2 marks										
d.	These points. .Name = "Arial" .Size = 20 .Bold = False .Italic = True .Color = wdColorRed Allow upper case and lower case combinations throughout. NOT =wdCol <u>ou</u> rRed or other misspellings.	5 marks										
	<b>Total</b>	<b>15 marks</b>										

2.		
a.		
i)	These points. Scanner Digital Camera	2 marks
ii)	Any reasonable, for example: Keyboard, mouse NOT scanner, digital camera	1 mark
b.		
i)	These points. Printer Speakers	2 marks
ii)	Any reasonable, for example: Monitor NOT printer, speakers	1 mark
c.		
i)	These points. A PDA is a portable, handheld hardware device that can fit in your pocket. Input to a PDA is using a touch screen.	2 marks
ii)	Any reasonable, for example: PDAs can have memory cards of varying sizes PDAs have software for e-mail or wordprocessing or spreadsheets, etc. PDA software is often a cut down version of software for desktop computers NOT portability, touch screen, hardware	1 mark
d.		
i)	These points. To keep track of lessons and appointments. To keep a list of tasks that need doing, such as homework.	2 marks
ii)	Any reasonable, for example: Play games. Listen to music. Send e-mail. Access the web. Use mapping software to find their way. Use as a remote control handset. Read a book. NOT task lists, calendar	3 marks
e)	Any reasonable, for example: So that the e-mail addresses, etc. of friends can be synchronised with the computer and will be the same on the PDA. So that the version of the calendar you are looking at is always the same. Allow: the desktop computer is a backup for the data on the PDA and vv.	1 mark
	<b>Total</b>	<b>15 marks</b>

3.		
a.	This point. Allow a number between 0 and 50.	1 mark
b.	These points. C10 and C11 If more than 2 cell references are given, -1 for each incorrect Allow upper and lower case	2 marks
c.	This point. =sum(C5:C10) or sum(C5:C10) or equivalents. Allow: =sum(C4:C10) or sum(C4:C10) or equivalents. Allow upper case and lower case. Refer written comments to the Chief Examiner.	1 mark
d.		
i)	These points. All in order, 2m Any 3 in order, 1m Correct order is: C B D A	2 marks
ii)	Any reasonable, for example: There is no need to travel to the autospare shop as the air filter is delivered by post. The air filter may be cheaper because there is more price competition on the web as there is a wider range of suppliers. It may be easier to find the right air filter as there are a wider range of specialist suppliers on the web.	2 marks
iii)	Any reasonable, for example: The mechanic will have to pay by credit card on the web and he/she hasn't got one. The mechanic will have to pay by credit card on the web and he/she is worried about on-line fraud and/or security. The mechanic has to wait for the air filter to be delivered. As the air filter is delivered by post there is an extra charge for postage.	2 marks
e.	Any reasonable, for example: The cost of postage would be less from the UK. Parts for the car being serviced are more likely to be available in the UK. If there are problems it's easier and cheaper to sort them out if the supplier is in the UK rather than in, for example, the USA.	2 marks
f.		
i)	Any reasonable, for example: It does not distinguish sufficiently between customers who have very different attitudes to payment (as a customer who pays after 4 weeks is given the same credit rating as a customer who does not pay). It does not give the mechanic a clear idea of who will pay and who will not.	1 mark
ii)	These points. At least 1 more category, 1m Categories immediately after payment are shorter than after 6 months, for example: on collecting the car; within 1 week; within 2 weeks; within 4 weeks; within 2 months; within 4 months; within 6 months; within 1 yr; within 2 yrs, 1m. Clearly distinguishes those who pay eventually from those who do not pay; for example, has a separate category for 'does not pay within 2 years', 1m	2 marks
	<b>Total</b>	<b>15 marks</b>

4.		
a.		
i)	Any reasonable, for example: A printout of the e-mail would not have the impact of a large poster. Colours and pictures need adding to the poster more attractive. The printed e-mail would not be as readable as a poster with large print.	2 marks
ii)	Any item of information that appears in the e-mail. If more than 3 items are given calculate marks as follows: (Number of items correct – number of items incorrect) max 3; min 0 For example: The trip starts in Settle. The train is a steam train. The trip starts at 8.30am. There is a special offer return price. The return price is £9. Date of the trip. Time of departure. NOT a copy or rewrite of the question.	3 marks
b.		
i)	Any reasonable, for example: Desk Top Publishing (DTP) Allow named software, e.g. Publisher NOT wordprocessing; presentation	1 mark
ii)	Any reasonable, for example: Better control over page layout. Wizards to help with poster design.	2 marks
c.	Any reasonable, for example: Pictures are more attractive when printed in colour. Posters have more impact when printed on very large sheets of paper.	2 marks
d.		
i)	Any reasonable, for example: The poster file is too large to fit on a floppy disk. One computer does not have a floppy disk drive.	2 marks
ii)	Any reasonable, for example: Zip disk, CD-R, flash memory stick or equivalents e.g. pen drive, memory card. Allow PDA, iPod Allow hard disk only if it is clear that this is removable or portable. NOT floppy disk	3 marks
	<b>Total</b>	<b>15 marks</b>

5.		
a.	These points. The driver's name. The car's registration number.	2 marks
b.	This point. Personal data must be relevant to the purpose for which it is collected.	1 mark
c.	These points. Relevant title and/or explanation of purpose of questionnaire, 1m Has provision to enter the driver's name; and the car's registration number, 1m. Other relevant field: For example: date of birth, staff or student, car model, 1m NOT gender, age Uses character boxes or similar to aid accurate data entry, 1m Uses tick boxes or similar to aid accurate data entry, 1m Uses any other technique to aid accurate data entry, 1m Signed and dated, 1m	4 marks
d.		
i)	This point. Verification Allow upper case and lower case combinations and misspellings.	1 mark
ii)	Any reasonable, for example: To make sure that what is written on the questionnaire is accurately transferred to the computer.	1 mark
e.	These points. The database can be sent to another secretary as an e-mail attachment. The car's registration number would be used as a key field in the database.	2 marks
f.	Any reasonable reason for, for example: As the school already uses a computer for school administration, it's easier to do this than use a paper based system. The information is stored securely as it is backed up as part of routine housekeeping procedures. The list is more private as it is not pinned on the notice board in the school office.  Any reasonable reason against, for example: If there isn't an existing computer that can be used for this application, the volume of data does not justify the expense of buying a new computer. It may be faster to look at a short list on a piece of paper than access the database. You do not need to know how to use a computer or a database if you keep the information on a piece of paper.	4 marks  max 3 adv.  max 3 disadv.
	<b>Total</b>	<b>15 marks</b>

6.		
a.	<p>These points.</p> <p>The ICT system adds one to the total when a person enters.</p> <p>The ICT system subtracts one from the total when a person leaves.</p> <p>The total is set to zero before people are admitted.</p>	3 marks
b.		
i)	<p>This point.</p> <p>The maximum number of people that can be admitted, i.e. the capacity of the stadium.</p> <p>Allow: How many seats there are. Number of places/spaces.</p>	1 mark
ii)	<p>These points.</p> <p>It compares the total to the capacity, 1m</p> <p>The stadium is full when the total is greater than or equal to the capacity, 2m</p>	2 marks
c.		
i)	<p>These points.</p> <p>People leave through 3m wide doors and cannot be counted accurately.</p> <p>The ICT system only counts those people who enter through the turnstiles.</p> <p>People who have reserved seats do not attend.</p>	3 marks
ii)	<p>Any reasonable, for example:</p> <p>Admit only one person and check that the total has increased by 1.</p> <p>Manually count the number of people in the stadium and compare this with the total calculated by the ICT system.</p>	2 marks
d.		
i)	<p>This point.</p> <p>Writes down all of: Johnson, Patel and no others in any order</p> <p>Allow upper and lower case combinations and misspellings.</p>	1 mark
ii)	<p>Any reasonable, for example:</p> <p>So that season ticket advertising can be sent to them.</p>	1 mark
iii)	<p>This point.</p> <p>Writes down all of: Wardak, Patel, Smith and no others in any order</p> <p>Allow upper and lower case combinations and misspellings.</p>	1 mark
iv)	<p>Any reasonable, for example:</p> <p>Because the street and the town have not been separated in the address.</p> <p>Because Wardak lives in Leeds Gardens and this is not the city of Leeds.</p>	1 mark
	<b>Total</b>	<b>15 marks</b>

7.		
a.		
i)	<p>These points.</p> <p>Put reflective security foil on the windows to stop people looking into the computer room, and to make it harder to break the windows.</p> <p>Make sure there is always a security guard in the foyer.</p>	2 marks
ii)	<p>Any reasonable, for example:</p> <p>Bolt or otherwise secure the computers to the desks.</p> <p>Block up the windows or fit metal security grills over them.</p> <p>Introduce double yellow lines to further restrict parking at the front of the building.</p> <p>Fit a burglar alarm in the computer room; BoD fit an alarm.</p> <p>Move the computer room from the ground floor.</p> <p>Control access to the computer room using swipe cards or coded locks.</p> <p>Redevelop the car park at the back of the building to make it more difficult to get to the computer room windows.</p> <p>Use a swipe card operated lock; NOT lock the doors.</p> <p>Fit a CCTV camera; BoD fit a security camera; NOT use a camera.</p> <p>NOT a security guard in any location; reflective security foil in any location</p>	4 marks
b.	<p>Any reasonable, for example:</p> <p>Use a firewall to prevent unauthorised installation of viruses and other malicious software from the Web.</p> <p>Ensure users have an authorised username <u>and</u> password before allowing them to connect to the wireless LAN.</p> <p>Encrypt all the data on the wireless LAN.</p>	3 marks
c.	<p>These points.</p> <p>Includes at least 3 computers and a file server in a star network, 1m</p> <p>Includes a networked printer, 1m</p> <p>Includes some feature that indicates possible web access, 1m</p> <p>Indicates in some way that the network is wireless, 1m</p> <p>Includes other reasonable features of a wireless LAN, 1m</p>	3 marks
d.	<p>These points.</p> <p>A 25 user software licence.</p> <p>A site licence.</p> <p>Freeware.</p>	3 marks
	<b>Total</b>	<b>15 marks</b>



8.		
a.	<p>The discussion does not need to be balanced between lifestyle, patterns of work and the environment. Interpret lifestyle, patterns of work and the environment very generously.</p> <p>Any reasonable effect on lifestyle, for example:          You tend not to vary your diet.          You do not have to worry about shopping for the food you keep in the fridge.          You can switch on the kettle and the cooker from work just before you go home.          You need to subscribe to broadband.          The appliances would probably cost more as they have more intelligence built in.          Your kitchen might have to have extra wiring to each appliance.          Someone else could cause trouble for you by turning your appliances on and off without you knowing.</p> <p>Any reasonable effect on patterns of work, for example:          Housework changes because you do not have to make shopping lists or go to the shops as often.          More van drivers are needed to deliver the goods.          More supermarket staff are needed to pick the goods that have been ordered.          If you forgot to switch off the cooker, you can switch it off from work so you do not have to go back home.</p> <p>Any reasonable effect on the environment, for example:          People will not drive to the supermarket to shop which reduces car congestion.          People will not drive to the supermarket to shop which reduces car pollution.          More delivery vans will be on the roads which increases congestion.          More delivery vans will be on the roads which increases pollution.          If you lock yourself out of the house leaving a pan on the cooker, you can switch it off from a neighbour's house.</p>	7 marks
b.	<p>Any reasonable advantage, for example:          You do not have to travel long distances to the shops.          Goods are delivered to you.          You have easy access to banking facilities without travelling.          You can do your banking at any time rather than having to wait until you are able to travel into larger towns and cities.          You have access to a much wider range of goods.          You are not dependant on local shops stocking what you need.          Helps the environment by using less petrol.</p> <p>Any reasonable disadvantage, for example:          You may have to be at home when the goods are delivered.          You cannot inspect the goods effectively as you only see pictures before delivery.          If a criminal/hacker gets your credit card details they can buy goods on-line in your name.          If a criminal/hacker gets the username and password for your on-line bank, they can transfer money out of your account.          A criminal/hacker can get your personal details; NOT someone can ...          Your opportunities to socialise will be reduced even more as you will not travel</p>	8 marks  max 5 adv.  max 5 disadv.

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	into larger towns and cities as often. Village shops and services close down as they are used less often. You need Internet access to make use of these services. You need to learn to use a computer. NOT you might get a virus.	
	<b>Total</b>	<b>15 marks</b>