



**General Certificate of Secondary Education**

**Information and Communication  
Technology 3522 Full Course**

*Specification B*

**3522/H Higher Tier**

**Mark Scheme**

*2009 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.

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- |   |           |  |         |
|---|-----------|--|---------|
| 1 | (a)       | Any reasonable, for example<br>The style of text has been changed to bold<br>The font has been changed<br>The text has been resized  | 2 marks |
| 1 | (b) (i)   | This point<br>word art<br>Allow misspellings   | 1 mark  |
| 1 | (b) (ii)  | This point<br>an autoshape<br>Allow misspellings   | 1 mark  |
| 1 | (b) (iii) | This point<br>clip art<br>Allow misspellings   | 1 mark  |
| 1 | (c)       | These points<br>Avoid too much fussiness caused by overuse of the software features<br>Make use of the features of the software to make the menu more interesting<br>The font should be easy to read                                   | 3 marks |
| 1 | (d) (i)   | Flash memory stick   | 1 mark  |
| 1 | (d) (ii)  | Any reasonable, for example<br>Hard disk<br>CD-RW; NOT CD, CD-ROM, etc. Must be writeable<br>DVD-RW; NOT DVD etc Must be writeable   | 2 marks |
| 1 | (d) (iii) | This point<br>.doc   | 1 mark  |
| 1 | (e) (i)   | These points<br>The new menu has a larger file size than the old menu<br>The new menu loads more slowly than the old menu  | 2 marks |
| 1 | (e) (ii)  | Any reasonable, for example<br>The new menu includes pictures and other graphics<br>NOT an answer given in e)i., that is:<br>The new menu has a larger file size than the old menu<br>The new menu loads more slowly than the old menu | 1 mark  |

**Total** 15 marks

- |   |          |   |         |
|---|----------|---|---------|
| 2 | (a)      | This point<br>Spreadsheet   | 1 mark  |
| 2 | (b)      | These points<br>4 paint brushes are needed at a cost of £5.50 each<br>3 cans of gloss paint are needed at a cost of £10.00 each                                       | 2 marks |
| 2 | (c) (i)  | These points, max 1m<br>A1, allow B1 and C1<br>A3, B3, C3, D3<br>A4, A5, A6, A7, A8<br>C10, allow A10 and B10   | 1 mark  |
| 2 | (c) (ii) | These points, max 1m<br>B4, B5, B6, B7, B8<br>C4, C5, C6, C7, C8  | 1 mark  |
| 2 | (d) (i)  | B (=B6*C6)  | 1 mark  |
| 2 | (d) (ii) | This point<br>A (=SUM(D4:D8))   | 1 mark  |
| 2 | (e) (i)  | This point<br>The decorator can rely on the software to do accurate calculations if it has been set up correctly<br>The client can be given a neatly printed estimate | 2 marks |
| 2 | (e) (ii) | Any reasonable<br>The software can be reused for other clients saving the decorator time and effort   | 1 mark  |
| 2 | (f) (i)  | This point<br>Laptop  | 1 mark  |
| 2 | (f) (ii) | Any reasonable, for example<br>Tablet, PDA, netbook, palmtop  | 1 mark  |
| 2 | (g) (i)  | These points<br>A (touch screen), C (touch pad), D (scanner), max 2m  | 2 marks |
| 2 | (g) (ii) | This point<br>G (printer), A (touch screen), max 1m   | 1 mark  |

**Total** 15 marks

3	(a)	This point 6	1 mark
3.	(b) (i)	Any reasonable, for example The key field must be unique Because it is the same as Wolf's	1 mark
3	(b) (ii)	These points The database should generate the Patient Numbers The database should automatically check that the Patient Numbers are correct	1 mark
3	(c)	Any reasonable, for example They were both born on the same day It doesn't matter if two dates of birth are the same as it's not the key field.	1 mark
3	(d) (i)	This point Gender	1 mark
3	(d) (ii)	These points It is faster to enter the data	1 mark
3	(d) (iii)	Any reasonable, for example Less space is needed to store the data on backing storage	1 mark
3	(d) (iv)	These points The code is easy to understand and easy to remember The length of the code is much shorter than the original data	2 marks
3	(e) (i)	This point Baty	1 mark
3	(e) (ii)	Any reasonable, for example The month cannot be 13 as there are only 12 months in a year (date is shown as 13/13/1972)	1 mark
3	(e) (iii)	Any reasonable, for example Check what is written on the questionnaire against the screen, 1m NOT double key verification	1 mark
3	(e) (iv)	These points 1<=MM<=12 or 0<MM<13 or valid combinations, 3m Mentions 0, 1 and 12, 13 as limits, 2m Mentions one of 0, 1 or 12, 13 as a limit, 1m	3 marks
<b>Total</b>			15 marks

- 4 (a) (i) These points 2 marks  
 Edited html: <h1>Willow Cottage</h1>  
 Correct syntax, 2m  
 Deduct 1 mark per error  
 Allow WillowCottage  
 Do not allow misspellings
- 4 (a) (ii) These points 3 marks  
 Number of line to be edited: 13  
 Edited html:   
 Correct line number, 1m  
 Correct syntax, 2m  
 Deduct 1 mark per error  
 Allow imgsrc, willow cottage.jpg  
 Do not allow misspellings
- 4 (a) (iii) These points 4 marks  
 Number of line to be edited: 2  
 Edited html: <title>Willow Cottage</title>  
 Correct line number, 1m  
 Correct syntax, 1m  
 Deduct 1 mark per error  
 Allow WillowCottage  
 Do not allow misspellings
- Number of line to be edited: 15  
 Edited html: <a href="http://www.willowcottage.com">  
 www.willowcottage.com</a>  
 Correct line number, 1m  
 Correct syntax, 1m  
 Deduct 1 mark per error  
 Allow ahref, www.willow cottage.com  
 Do not allow misspellings
- 4 (b) (i) This point 1 mark  
 The web page for Willow Cottage would be saved as hazelcottage.htm
- 4 (b) (ii) This point 1 mark  
 Save As
- 4 (c) Any reasonable, for example 2 marks  
 Number of people; If pets are welcome;  
 Start day or date of holiday; Duration of holiday or departure date;  
 Price range; Location;  
 Specific features of rooms, e.g. balcony, en suite;  
 Specific activities available, e.g. horse riding
- 4 (d) These points 2 marks  
 Within the Holidays folder there are at least two folders called  
 something like Hotel, Bed & Breakfast, etc., 1m  
 Within at least one of the folders for Hotel, etc. there is an Images folder,  
 1m  
 Within the Holidays folder there are web pages all together and an  
 Images folder, 1m  
 Within the Holidays folder there are at least two folders called  
 something like Hotel, Bed & Breakfast, etc. and at the same level there  
 is an Images folder, 1m  
 Accept different but meaningful names for the Images folder  
 There is a folder for each unit of accommodation with the web page and  
 pictures within it, 1m

**Total** 15 marks

- 5 (a) (i) This point 1 mark  
You should change your password frequently
- 5 (a) (ii) Any reasonable, for example 1 mark  
You should not watch someone entering their password  
You should keep your password secret  
The password should include numbers and letters
- 5 (b) Any reasonable, for example 3 marks  
Changes password on line:  
Enters current password or it's clear the user is logged on, 1m  
Enters new password, 1m  
Enters new password again, 1m  
Allow: ask the teacher, etc., max 1m
- 5 (c) (i) Any reasonable, for example 1 mark  
Many students downloading music slows down the network  
Students are at school in order to be educated not so they can download music  
NOT it's illegal unless you pay for it
- 5 (c) (ii) Any reasonable, for example 1 mark  
Downloaded software may contain viruses  
Installing the software may cause the network to malfunction  
To stop pupils downloading software which is not relevant to their education  
NOT a reason given elsewhere in 5c)
- 5 (c) (iii) Any reasonable, for example 1 mark  
To prevent students maliciously deleting others' files  
To help prevent students copying each others' work  
You may have private files in your user area  
NOT a reason given elsewhere in 5c)
- 5 (c) (iv) Any reasonable, for example 1 mark  
To prevent students accessing inappropriate material, e.g. pornography  
To prevent students attempting to download music or software  
NOT a reason given elsewhere in 5c)
- 5 (d) Any reasonable, for example 2 marks  
Reason: Students attempting to download files, 1m  
+ Solution: Block the downloads, 1m  
Reason: Some element of network hardware too slow/lacks capacity, 1m  
+ Solution: Upgrade the hardware, 1m  
Reason: Firewalls and filtering, 1m  
+ Solution: purchase dedicated hardware; educate users and remove some filters, 1m  
Allow: Reason: a large number of students using the network  
+ Solution: upgrade the network  
NOT Solution: stop students using the network
- 5 (e) These points. 4 marks  
Correct topology (line/bus or star, not ring), including at least three networked computers and a file server (allow: CPU, main computer), 1m  
Networked hardware: e.g. printer or printer server, scanner, hub, wireless access point, etc., 1 each, max 2m  
Local hardware: printer, scanner, etc., 1 each, max 2m  
Connection to other networks, 1m

**Total** 15 marks

6 (a) These points 3 marks  
 The cost of running an ICT system is cheaper than using the current manual system  
 Information on the availability of parking spaces can be displayed automatically  
 All the car parks ParkSafely own are run in very similar ways

6 (b) These points 3 marks  
 Interview car park workers to find out if there are any problems with the current way in which the car parks are managed  
 Estimate the cost of new software and hardware  
 Briefly describe what the proposed ICT system could be used for

6 (c) These points 2 marks

Label	
D	All in correct order, 2m Four in correct order, 1m
C	
E	
A	
B	

6 (d) These points 3 marks

E	1m	
F D	1m	
B		
C	1m	
A		

6 (e) (i) This point 1 mark

Systems Analysis and Design	B
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6 (e) (ii) This point 1 mark

Documentation	E
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6 (e) (iii) This point 1 mark

Testing	A
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6 (e) (iv) This point 1 mark

Monitoring	D
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**Total** 15 marks



7	(a) (i)	This point Magnetic stripe	1 mark
7	(a) (ii)	Any reasonable, for example Bar code Allow: Chip and PIN Must be a means of recording the information on the identification card NOT a means of replacing the card, for example, using biometrics	1 mark
7	(b) (i)	These points Absent pupils gave their identification cards to other pupils who registered for them Some pupils registered using their identification cards then went home	2 marks
7	(b) (ii)	Any reasonable, for example Some pupils are present in school but not in class as they are rehearsing for a school play	1 mark
7	(c) (i)	These points Ensure pupils can only enter and leave school through turnstiles which are operated using their identification cards Teachers should closely supervise pupils who are registering using their identification cards	2 marks
7	(c) (ii)	Any reasonable, for example It could take too long to do at the start of the lesson or at other times and disrupt teaching and learning It's too unreliable, for example, some pupils may not do it and be marked absent when they are present It might be too expensive to put this technology in every classroom	1 mark
7	(c) (iii)	Any reasonable, for example Have only one entrance to the school Use CCTV cameras to monitor entry and exit points to/from the school Use biometrics which stop pupils registering each other NOT an answer given in c)i. or ii.	1 mark
7	(d)	These points The ICT system automatically contacts parents or carers to let them know if their children are absent A picture of the pupil is printed on the identification card so that teachers can check it belongs to the pupil using it A record of a pupil's attendance is kept on the ICT system	3 marks
7	(e)	Any reasonable, for example Enable pupils to buy food in the school cafeteria instead of using cash Produce reports showing what pupils eat in the cafeteria Allow pupils to travel on the school bus without using cash Provide pupils with proof of their age Produce individual attendance reports Use biometrics to register pupils Remind pupils of their timetable for the day Access control, e.g. to rooms or computers Report pupils' whereabouts in school	3 marks

**Total** 15 marks

- 8 (a) (i) These points 3 marks  
 There is a shortage of accommodation in prisons  
 The police can spend more time on other tasks  
 A criminal can get used to living at home again before their prison sentence is complete
- 8 (a) (ii) These points 2 marks  
 If the tag is removed, the police computer will not know the location of the criminal  
 If the tag is out of range of the wireless network, the police computer will not know its location
- 8 (a) (iii) Any reasonable, for example 1 mark  
 If the Wide Area Network (WAN) crashes, the police computer will not know the location of the tag
- 8 (b) Any reasonable way, for example, 1m each 9 marks  
 NOT identification cards  
 Use of bank/credit card or similar  
 Use of public services recorded  
 Video of individuals, e.g. CCTV or monitoring using webcams  
 Tracking vehicles, e.g. speed cameras, congestion charging  
 Mobile phone tracking  
 IP address  
 NOT email, social networking sites, chip every citizen  
 Any reasonable advantage, for example, 1m each  
 Allow advantages related to having an ID card, e.g. to prove who they are  
 Only one card needed instead of several bank and credit cards  
 Entitlement to use health and welfare services is quickly determined  
 Those committing crimes video recorded and more likely to be convicted  
 Motorists less likely to speed  
 Congestion charging collected automatically  
 Parents/police can find lost children  
 Any reasonable disadvantage, for example, 1m each  
 Allow disadvantages related to having an ID card  
 Must carry identity card all the time  
 Punished if they don't have the ID card  
 Lack of privacy  
 Legal citizens exploited by those outside the system, for example,  
 No restraint on speeding for motorists in stolen cars  
 No congestion charging, road tax or insurance for motorists in stolen cars  
 Children under constant surveillance

**Total** 15 marks