



**General Certificate of Secondary Education
June 2010**

**Information and Communication Technology
3521 Full Course**

Specification A

3521/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) | A joystick is used to input information A sensor is used to input information A plotter is used to output information | Correct answer only Correct answer only Correct answer only | 1 1 1 |
| 1 | (b) | A flash memory card is used to store information | Correct answer only | 1 |
| 1 | (c) | hard disk (drive) CD-ROM (drive) DVD-ROM (drive) DVD-RAM (drive) | Memory stick /pen drive floppy disk (drive) Flash memory Any 1 x 1 mark | 1 |
| 2 | (a) | A | Correct answer only | 1 |
| 2 | (b) | B | Correct answer only | 1 |
| 2 | (c) | D | Correct answer only | 1 |
| 2 | (d) | C | Correct answer only | 1 |
| 3 | (a) | Line spacing Centre | Correct answer only Correct answer only | 1 1 |
| 3 | (b) | Spell checker Grammar checker Both words needed (not just “spelling”) | Any 1 x 1 mark | 1 |
| 3 | (c) | Select/Highlight the fourth row and cut out this row Allow copy instead of cut only if followed by delete | | 1 |
| | | Position the cursor at the end of the flyer and paste in line four | | 1 |
| | | Or CTRL X CTRL V Key words in bold | | |
| 4 | (a) | Don't need to remember the “commands” needed Keyboard/typing often not needed Often “language free” / visual / icons to click on Easy to use / easy to understand / user friendly | Any 1 x 1 mark | 1 |
| 4 | (b) | Command Driven Menu Driven | Correct answer only Correct answer only | 1 1 |
| 4 | (c) | use of colour use of sound use of images/pictures/graphics position of items on screen help facilities house style font/size NOT easy to use. | Any 2 x 1 mark | 2 |
| 4 | (d) | (i) Data transfer to and from peripherals Sharing resources between different tasks | Correct answer only Correct answer only | 1 1 |

| | | | | |
|---|-----|------|--|---|
| 4 | (d) | (ii) | Supervises the programs whilst they are running / sharing CPU time Provides start up instructions (boot up) Handling interrupts Share resources between different tasks Reporting on errors/Error handling Allocation of storage space/managing memory System security | 1 |
| | | | Any 1 x 1 mark | |
| 5 | (a) | | A key field must never be empty | 1 |
| | | | A key field must contain a different value in each record in the database table | 1 |
| | | | Correct answer only | |
| | | | Correct answer only | |
| 5 | (b) | | It takes less time/quicker to enter data It takes up less storage space/memory Fewer errors | 1 |
| | | | Any 1 x 1 mark | |
| 5 | (c) | (i) | Fully Paid field has a blank / no entry for Robert Allen | 1 |
| 5 | (c) | (ii) | Used a presence check / checked the field to make sure there was an entry Signalled error message / could not proceed until an entry is made into the field. | 1 |
| | | | | 1 |
| 5 | (d) | | To lock all computer rooms when not in use | 1 |
| | | | Correct answer only | |
| | | | Use clamps and cables to attach the computer to the desk | 1 |
| | | | Correct answer only | |
| 5 | (e) | | Make it long/quite long/more than 6 characters Make it something not easy to guess/not related to you Make it a combination of letters/numbers/upper lower case Make something you will remember Don't write it down/don't tell anyone Change it regularly | 2 |
| | | | Any 2 x 1 mark | |
| 6 | (a) | (i) | Copyright | 1 |
| | | | Correct answer only | |
| 6 | (a) | (ii) | If 6a (i) not copyright 6a (ii) cannot be awarded marks | 1 |
| | | | Bought an extra licence Not taken the software home Take the computer home Only install software on 4 computers at office | |
| | | | Any 1x 1 mark | |
| 6 | (b) | (i) | What People who gain unauthorised / illegal access to other peoples' computer system (access is usually remote) | 1 |
| | | | Why To gain access to copy / damage / corrupt / add virus / delete / look at / fraud | 1 |

| | | | |
|---|-----|--|---|
| 6 | (b) | (ii) Software /is a program Replicates itself (may) cause problems/damage to other software or systems Any 2 x 1 mark | 2 |
| 6 | (c) | Describe possible health and safety issues associated with the staff at the office using computers for long periods of time. 1 mark is to be given for each relevant issue. Health issues Back/Neck pain/problems Headaches Eye strain Stress Wrist problems/Carpel Tunnel Syndrome/RSI(finger problems) Possible radiation from monitor Possible epilepsy from monitor Overheating of the room Safety issues Trailing wires Electrical faults Overload sockets/supply Any 4 x 1 mark | 4 |
| 7 | (a) | C4 Correct answer only | 1 |
| 7 | (b) | (=)sum(C3:C11) – allow C12 or C13 instead of C11 (=)C3+C4+C5+C6+C7+C8+C9+C10+C11 – allow +C12+C13 Any 1 x 1 mark | 1 |
| 7 | (c) | =C3*3+D3 Correct answer only | 1 |
| 7 | (d) | Click in F3/cell containing the formula Replicate the formula down / drag down the bottom right hand corner to cell F11 Allow VALID copy and paste answer | 1 |
| 7 | (e) | Click on the word Help or ‘?’ on the top of the spreadsheet / press F1 Type in formulae/formula and select one of the options given | 1 |
| 7 | (f) | E-mails will usually arrive faster Correct answer only E-mails will be cheaper to send Correct answer only | 1 |
| 8 | (a) | Detailed planning for the reports that will be produced by the system Correct answer only A test plan with test data Correct answer only | 1 |

| | | | |
|----------------------------|-----|---|---------------------------------|
| 8 | (b) | Reasons for choice of software/design choices Reusability Mail-merge plans Structure of database / spreadsheet / DTP item (Master pages) Formatting of database / spreadsheet / DTP item (Master pages) Plans of database / spreadsheet / DTP item (Master pages) (not reports) Linking of database tables/ spreadsheets Implementation plans / planning inputs / planning searches / sorts / reports | 1 |
| Any 1 x 1 mark | | | |
| 8 | (c) | Expected results | Correct answer only 1 |
| 8 | (d) | (i) 10 | Correct answer only 1 |
| 8 | (d) | (ii) 15 | Correct answer only 1 |
| 8 | (e) | A piece of normal data/type of data that the system will accept/data expected to be input. A well explained example (e.g. exam mark 0-100 any value >0 & <100) Either bold part for 1 mark | 1 |
| 8 | (f) | Feasibility Implementation Evaluation Monitoring User Guide/Documentation Maintenance | Any 1 x 1 mark 1 |
| 9 | (a) | (i) Selling Price (£) for DVD recorder/DV061 is 7229.99/too high | 1 |
| 9 | (a) | (ii) The value is much too high or equivalent for a DVD recorder / compared to other items | 1 |
| 9 | (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 |
| 9 | (b) | (i) FG123 TV459 Ignore grammar and punctuation or multiple lines | 1 |
| Correct answer only | | | |
| 9 | (b) | (ii) TV781 WM314 Ignore grammar and punctuation or multiple lines | 1 |
| Correct answer only | | | |

| | | | | |
|----|-----|-------|--|-------------|
| 9 | (b) | (iii) | FZ034 Freezer FG156 Fridge TV517 Television Not “TV” or “Telly” but ignore minor spelling mistakes Correct answer only | 1 |
| 9 | (c) | (i) | List Product Code When Product Name Equals DVD player (Ignore missing capital letters) Correct answer only | 1 |
| 9 | (c) | (ii) | List Product Code, Product Name When Selling price (£) Greater than 200 And Selling price (£) Less than 500 (Ignore missing capital letters) Correct answer only Correct answer only Correct answer only | 1 1 1 |
| 9 | (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 NOT easy to use (0) Any 2 x 1 mark | 2 |
| 10 | (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) <ul style="list-style-type: none"> • 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 Any 4 x 1 mark | 4 |

- 10 (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