



General Certificate of Secondary Education

Information and Communication Technology 3527 Short Course *Specification A*

3527/H Higher Tier

Mark Scheme

2007 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) | Digital camera Graphics digitiser Keyboard Light pen Mouse Sensor Scanner (close variation but clearly correct) | | 2 x 1 mark |
| | (b) | concept keyboard | MICR (reader) | OCR (reader) |
| | | web cam | OMR (reader) | tracker ball |
| | | joystick/games controller | bar code (reader) | graphics tablet |
| | | laser pen | touch screens/pad | microphone |
| | | Interactive whiteboard | Keypad/glidepad | |
| | | Magnetic strip reader/card reader Please do not allow backing store device (close variation but clearly correct) | | 1 mark |
| | (c) | Laser printer Monitor Plotter Speaker (close variation but clearly correct) | | 2 x 1 mark |
| | (d) | floppy disk (drive) | memory stick/pen drive | |
| | | Zip disk (drive) | CDR (drive) | |
| | | CD-RW (drive) | RAM/EPROM | |
| | | Memory/flash card | Dat tape/Magnetic tape (drive) | |
| | | MP3 player/iPod | (close variation but clearly correct) | 1 mark |
| 2 | | C | 1 mark | Correct answer only |
| 3 | | B | 1 mark | Correct answer only |
| 4 | | D | 1 mark | Correct answer only |
| 5 | | A | 1 mark | Correct answer only |
| 6 | (a) | Line spacing | 1 mark | Correct answer only |
| | | Centre | 1 mark | Correct answer only |

- (b)
- Picture/clipart added/graphic/image/logo
 - Text/font size made bigger/smaller/changed
 - Text font type e.g. Arial changed/Word art used
 - Text made bold/underline/italic/text style changed

For text – allow words/writing

- Using bullet points/numbering/lists
- Drawing tools/auto shape
- Tables
- Text boxes
- Borders/Border Art
- Columns/Tab
- Shaded/pattern/watermark/colour text/ coloured background
- Text wrapping
- Text right/(fully) justify/indent/margins/alignment/rotation

Change font – scores 1 mark (size or style are repeats)

Any 2 x 1 mark

- (c)
- | | |
|--------|------------------------------------|
| Step 1 | Highlight the second special offer |
| Step 2 | Cut |

1 mark

- | | |
|--------|---|
| Step 3 | Position the cursor just above the first special deal |
| Step 4 | Paste |

1 mark

(close variation but clearly correct)

Allow 1 mark – even if second mark is wrong

7

NOT names or address that are already given

Town/City/county count as repeats

Title at least 3 (or coded)

Postcode at least 7

(Or clear 3box gap 3 box)

Telephone number (day) at least 11

Telephone number (evening) at least 11

Contact tel. Number at least 11

Mobile tel. Number at least 11

NOTE MAX TWO TELEPHONE NUMBERS

Fax number at least 11

E-mail address at least 20 (sensible splits)/memo

Photo box to fit

Date of membership/expiry of membership at least 8(2-2-2/4)

(Type of) identification given at least 10

DOB at least 8(2-2-2/4)

Gender at least 6 (or coded)

Signature Memo

Signature (parents/carer/guardian) Memo

Date at least 8(2-2-2/4)

NB – could use the date at end of form

NOT NI - Not doctor, not doctor's address etc.

NOT age

Boxes only unless memo specified

[] – Open boxes are OK – boxes with small vertical lines are OK
but dashes are NOT/ just lines are not

Memo = lines/dashes/large box/dots

IGNORE FILLING IN

Mark only the first 4 fields (Do not count first name, surname, address 1, address 2)

Ignore correct duplicate fields e.g. 3rd telephone number – these do not count in the FOUR

Tick correct field name – do not penalise lack of capitals or spelling

Tick correct number of boxes/memo field for the corresponding field name.

Count ticks - divide by 2 - round down **MAX 4 marks**

- 8 (a) Extra words will NOT gain one of the marks (think of it as marking all the work then -1. Min ZERO). Allow FD or other abbreviations. Allow cm or degrees.

Clockwise solution

Forward 10 **1 mark** **Correct answer only**
(or equivalent i.e. Forward 2 Forward 8)

Right 90
Forward 1 **1 mark** **Correct answer only**

Right 90
Forward 8 (allow equivalent)
Right 90
Forward 1 **1 mark** **Correct answer only**

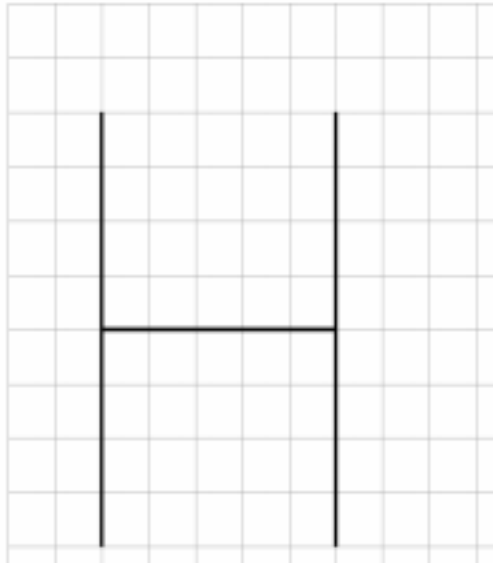
Anticlockwise solution

Forward 2 **1 mark** **Correct answer only**
(or equivalent i.e. Forward 1 Forward 1)

Right 90
Forward 1 **1 mark** **Correct answer only**

Left 90
Forward 8 (allow equivalent)
LEFT 90
Forward 1
Left 90
Forward 8 (allow equivalent) **1 mark** **Correct answer only**

(b)



Correct 1st vertical line - **1 mark**
(correct place and orientation)

Correct 1st horizontal line - **1 mark**
(correct place and orientation)

Correct 2nd vertical line - **1 mark**
(correct place and orientation)

NB – if the second line is wrong. The third mark can still be given for the correct third line (even in the wrong position)

- | | | | |
|----|--|--------------------------------|--|
| 9 | (close variation but clearly correct) RAM back-up copy mail-merging data logging | | 1 mark 1 mark 1 mark 1 mark |
| 10 | (a) spreadsheet | 1 mark | Correct answer only |
| | (b) D12 (close variation but clearly correct) | | 1 mark |
| | (c) = D8-D21 | 1 mark | Correct answer only |
| | (d) Number/numeric/integer | | 1 mark |
| | (e) A virus may corrupt the information | 1 mark | Correct answer only |
| 11 | (a) It is a piece of software It replicates once installed | 1 mark 1 mark | Correct answer only Correct answer only |
| | (b) Floppy disk/portable storage device e-mail/attachments hackers | | Internet/download/popups pen drive 1 mark |
| | (c) Faster to search (NOT easier) / quicker to find Faster/neater/easier to edit/update/backup Faster to sort/sort on multiple fields Takes up less space Less chance of losing/misplacing records Faster/neater to graph data Faster/more attractive generation of reports Access by several people at one time More secure because..... Access from outside surgery Export to other applications | | Any 2 x 1 mark |

- 12 (a) (i) sending the order to the supermarket from their PC
1 mark Correct answer only
- (ii) the supermarket taking the money from their credit card
1 mark Correct answer only
- (iii) a van from the supermarket delivering them to their house
1 mark Correct answer only

(b) **Advantages**

- Cheaper/quicker in the long run because.....
 - Saves lots of their time travelling there and doing the shopping
 - Saves money on petrol and putting mileage on the car/ bus fare
- Do not have to leave the house/ order from comfort of their home
- Can order them 24/7 not just when the supermarket is open
- Use repeat orders to save time
- Wider choice
- Faster to search (on-line)
- Home delivery

NOT just cheaper or faster

Any 2 x 1 mark

(c)

Disadvantages

- Not feel a personal service/ cannot choose own groceries/ cannot see what you're getting/damaged
- Virus issues/Hacking issues
- Fear of buying due to credit card security would cut sales/fraud
- Not everyone has access to/knows how to use Internet/computers /network down.

Arrives late/ does not arrive /wrong goods delivered/ have to wait for goods

1 mark

- 13 (a)
 - Sending a text message/attachment/file/picture
 - Over a communications network/LAN/WAN/Internet /WAP phone/between computers**NOT just electronic-mail** **1 mark**
Either bullet point can score the mark
- (b) (i) The e-mail will usually arrive quicker than the post
1 mark Correct answer only
- (ii) **Advantage compared with post**
 - Same delivery time anywhere in the world
 - Free/cheaper to send than paying postage/send attachments at no extra cost.
 - Less chance of getting lost
 - Send to many people at the same time
 - Send when ready/immediately (not when post is collected)
 - Check e-mails from many places (World wide)
 - Don't have to leave the house to send it.**NOT – does not need the receiver to be there** **1 mark**
- (iii)
 - Problems with computers are more common
 - Catch/send virus
 - Can't send parcel/bulky items
 - Need a computer/Internet/WAP phone etc.**1 mark**
- 14 (a) (i) The driver would not be in any danger using a simulator
1 mark Correct answer only
- Road and weather conditions on the simulator can be changed as needed
1 mark Correct answer only
- (ii) The distance taken to stop will vary with weather conditions
1 mark Correct answer only
- (b) Spreadsheet **1 mark Correct answer only**
- (c) Changing a variable or variables within the model
- Looking at/analysing the results of these changes
- Make decisions/predictions/more changes as a result of the analysis/what if.../goalseeker
- The process is often cyclic/repeated **Any 2 x 1 mark**
(All answer maybe by means of an example)

- 15 (a) Checking of data on/when input
by software
to see if it is reasonable/sensible/follows the rules (NOT correct)
Sensible example scores 1 mark **Any 2 x 1 mark**
- (b) (i) Carr Susan's left blank/no entry (in reg group) **1 mark**
- (ii) Presence check **1 mark** **Correct answer only**
- (c) (i) Mark for Afsal Nasir is 104 this is greater than 100/mark too large **1 mark**
- (ii) Range check **1 mark** **Correct answer only**
- (d) Not unique/pupils could have the same name **1 mark**
- 16 (a) Information must not be excessive for the purpose
1 mark **Correct answer only**
- Information must not be transferred to countries outside the European Union
1 mark **Correct answer only**
- Information must be obtained fairly/lawfully
1 mark **Correct answer only**
- (b) (i) 5 **1 mark** **Correct answer only**
- (ii) ID Number (close variation but clearly correct) **1 mark**
- (iii) A key field must be unique in a database table
1 mark **Correct answer only**
- (c) Video/film/products/stock table
Supplier table
Orders/rentals/sales table **1 mark**
- (d) Avoids duplication of data/redundant data within tables
Less data entry so less time and less likely to make errors
Can produce report/select fields/take fields from each of the each of the tables
1 mark

17 (a) **1 mark is to be given for each relevant issue.**

Health issues

Back/Neck pain/problems

Headaches

Eye strain

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 5 x 1 mark

(b) **Max 1 mark for each issue – no matter how well it is expanded – Max 4 marks**

Health issues

Regular breaks/walk around/relaxation techniques/fresh air

Correctly adjusted chair/back support correct in chair/foot rest

Adjust monitor distance/brightness

Visit doctor/eye test

Use wrist support/ergonomically designed keyboard

Check radiation level/change type of monitor/possible “screen shield”

Use of air conditioning/ventilation

Safety issues

Make sure all leads are secure/out of reach

Repair faults/report faults

Regular service and checks/PAT tests

Use of blinds/fluorescent diffusers

Install additional sockets

Any 4 x 1 mark