



General Certificate of Secondary Education

Information and Communication Technology 3527 *Specification A*

3527/H Short Course (Higher Tier)

Mark Scheme

2005 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.

✓ correct
✗ wrong
R repeat
BOD benefit of doubt
NS not sufficient
max maximum mark reached

Subtotals in margin, totals at end of question – transfer to front of paper
Cross out any unanswered question space and blank pages

Questions requiring answers to be ticked should be marked as follows:
More than one tick on a line then mark wrong (0)
If more than the permitted number of choices ticked in a list then mark up to the permitted number

1(a)	Input	Correct Answer only	1 mark
	Storage	Correct Answer only	1 mark
	Output	Correct Answer only	1 mark
	Input	Correct Answer only	1 mark
	Output	Correct Answer only	1 mark
	Input	Correct Answer only	1 mark
	Output	Correct Answer only	1 mark
	Please make sure you do not count the first tick (exemplar)		
	More than one tick along a row (0)		
			(7 marks)

(b)	graphics digitiser keyboard light Pen joystick sensor touch screens/pad	concept Keyboard OCR OMR bar code reader graphics tablet microphone	MICR Interactive board
		Any 1 X 1 mark	1 mark

(c)	dot-matrix printer actuator screen (VDU)	lights (LEDs) digital projector motor	
		Any 1 X 1 mark	1 mark

(d)	CD-ROM DVD ROM DVD Ram hard disk	CD-RW CD-R RAM ROM	EPROM PROM USB drive/memory stick MP3
	NOT CD or DVD	Any X 1 mark	1 mark

Total 10 marks

2(i) sensor	Correct answer only	1 mark
(ii) data logging	Correct answer only	1 mark
(iii) period of logging	Correct answer only	1 mark
(iv) logging interval	Correct answer only	1 mark
(v) calibrate	Correct answer only	1 mark
(vi) feedback	Correct answer only	1 mark

Total 6 marks

3. (a) Reduce the duplication of data only put in the data once
Easier/faster to keep the data up to date
Increases the consistency of data/ fewer mistakes or errors
- Any 2 x 1 mark each** **2 marks**
- (b) **Only credit the first three ticks**
- | | | |
|-----------------------------|----------------------------|---------------|
| Animal's name | Correct answer only | 1 mark |
| Date of last treatment | Correct answer only | 1 mark |
| Date of birth of the animal | Correct answer only | 1 mark |
- (c) A unique field that is used to identify a record **1 mark**
- (d) Animal number / Id. Number or suitable equivalent **1 mark**
NOT owner code or account number

Total 7 marks

4 (a) Allow two DPA responsibilities on the same line and mark up to the first three altogether

- Process data fairly/lawfully
- Obtain data fairly/lawfully
- Destroy data when no longer needed/not kept longer than needed
- Keep data secure (against /loss/damage/unlawful processing)
- Only use for registered purpose
- Allow customers to see data on request/ process within the rights of the data subjects.
- Keep up-to-date/accurate/correct
- Data must not be excessive for the purpose
- Data must not be transferred to countries outside EEC

Any 3 x 1 mark **3 marks**

(b)

- Right to see the data about themselves/be given a copy
- Right to have wrong data corrected/deleted (*must be in passive voice*)
- Right to seek compensation for damage caused by inaccurate data
- Prevent the processing if it is likely to cause damage or distress
- Prevent data being used for direct marketing
- Prevent automatic decisions being made on the basis of data held
- Make a request to the Data Protection commissioner if Act contravened

Any 2 x 1 mark **2 marks**

Total 5 marks

-
- 5 (a) C6 **Correct answer only** **1 mark**
More than 1 tick the list mark the first one
- (b) (i) Currency **Correct answer only** **1 mark**
(ii) Number **Correct answer only** **1 mark**
(iii) Formula **Correct answer only** **1 mark**
Ignore spelling errors
- (c) Time can be saved by replication of formulae **CAO** **1 mark**
Changes are automatically re-calculated in totals **CAO** **1 mark**
- (d) Power cut
Virus
Hacking
Cost of buying the software
Computer crash/Hardware or software problems stop access to the spreadsheet
Training needed/ some people cannot use computers
- Any 1** **1 mark**
- NOT disadvantages that apply to calculators**
(e.g. may get deleted, not easily transported around)
- Total 7 marks**

6	Title	at least 3
	Surname	at least 10
	First name	at least 10
	Other names	at least 10

(Name and 20 boxes for one tick only)

NOTE MAX THREE FOR NAME

Street/house no- Address line 1	at least 10
Town/Area/County -Address line 2	at least 10
(address – instead of above)	at least 20/memo/or 2x10

NOTE MAX TWO FOR ADDRESS LINES

If terms Address 1 and street are mixed up – usually gains one tick

Post code/zip code	at least 7/ 3 space 3
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)
Gender	at least 6 or clear coding
Photo	box to fit
Type of membership	at least 10 or clear choices
Date of membership/expiry of membership	at least 8(2-2-2/4)
NB – could use the date at end of form	
DOB	at least 8(2-2-2/4)
Medical details	at least 20 or memo
Bank details – max 1/method of payment	at least 8
Signature	Memo

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

Boxes only unless memo specified

[] – open boxes are OK – boxes with small vertical lines are OK but dashes are NOT.

Memo = lines/boxes/dashes IGNORE FILLING IN

Mark only the first 8 fields

Ignore correct duplicate fields e.g. 3rd telephone number – these do not count in the EIGHT (i.e. Look at the first 9)

Tick correct field name – do not penalise lack of capitals

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

Count ticks - divide by 2 - round down

MAX 8 marks

Sub total 8 marks

7.Ignore any leading OPEN**Accept CLOSE for 1 mark even the command(s) are wrong****Part A****DOWN 3** Correct answer only **1 mark****CLOSE** Correct answer only **1 mark**

Mark independently

(CLOSE ends this section)

Part B – look for**UP 3** Correct answer only **1 mark****RIGHT 14** Correct answer only **1 mark****DOWN 4****OPEN** Correct answer only **1 mark****UP 4****LEFT 14** Correct answer only **1 mark****NB – stop at first ERROR**

Ignore obvious spelling errors, incorrect case and spacing

If all along one line then accept (e.g. DOWN 3 CLOSE, etc)

Allow labelled instructions

Deduct 1 mark for use of consistent abbreviations throughout (e.g. RT – RIGHT)**Deduct 1 mark for use of units (e.g. cm or units)****OR deduct one mark for repeat of whole instruction****Max deduct is 1 mark**

SPECIAL CASE

Part B could contain a version that works not using the commands from the list.

This will be given either 2 marks for totally correct or 0 marks

AND stop at first mistake as before (wrong move)

Total 6 marks

8 (a)

- (i) Group of (related) fields
 Part of a file (or made up of a number of fields)
 Information relating to one person
 One row in a database (table)
 NOT reference to spreadsheet
 Examples are OK **1 mark**

- (ii) Part of a record
 Containing one data item
 Smallest part of a file
 Column heading/title in a database
 Examples are OK **1 mark**

- (b) Faster to search (NOT easier)
 Faster to sort/sort on multiple fields
 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 Sports centre
 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 each **2 marks**

- (c) The staff may need training to use the computers **CAO** **1 mark**

- There is a potential danger from hackers **CAO** **1 mark**

Mark first two in the list
Any 3 x 1 mark **3 marks**

Total 9 marks

9(a) **Advantage to Mr Johnson**

- The information is more likely to be up to date.
- Can access details from any computer link/home/not need to go to the bank
- **Get** information available 24/7
- **Help** available 24/7
- **Give/get** information 24/7 banking actions
- Get printouts
- Export information to other documents

NOT quicker on its own
1 mark per correct answers x 2 **2 marks**

(b) **Advantage to bank**

- Cheaper as staff costs reduced/ no cost of building.
- Staff could be located anywhere
- Provide a faster service for customers/Provide a “better” service for customers 24/7 – no waiting in queues
- Improve company image (up to date)
- Is able to reach more customers/worldwide market

1 mark per correct answers x 2

2 marks

(c)

Password
Levels of access
Encryption
Firewall
Software to remove “spyware”

NOT anti virus software

1 mark per correct answers x 2

2 marks

Total 6 marks

10. (a) Checking of data on input (before processing)
by software
to make sure it is sensible/reasonable – **not correct**
Allow one example of data validation (e.g. range check) 1 mark

Any 2 x 1 mark

2 marks

Please make sure you do not count the first tick (exemplar)

If two or more ticks on a line then (0)

- | | | | |
|-----|--|----------------------------|---------------|
| (b) | Accept | Correct answer only | 1 mark |
| | Reject | Correct answer only | 1 mark |
| | Reject | Correct answer only | 1 mark |
| | Accept | Correct answer only | 1 mark |
| | Accept | Correct answer only | 1 mark |
| (c) | Details of how to install the database | Correct answer only | 1 mark |
| | Trouble shooting guide | Correct answer only | 1 mark |

Total 9 marks

11 Design issues

- Meets user needs
- Sketch plans showing the layout of pages/plan of site map
- Planning what will go on each page
- DTP plans (max 2)
 - Use of colour – text or background
 - Suitable image /logo
 - “highlight” key words/phrases/etc.
 - Text size, style and contrast (readable)
 - Consider data in tables
- Software specification/decide the programming language to be used
- Consistent layout of pages/ Plans for “Corporate image”
- Test plan/test data
- Plans/designs for hyperlinks between pages/navigation bar
- Plans/designs for use of sound/video clips
- Plan/designs links to other sites
- Plan/designs e-mail link
- Plan/designs for ordering pizzas
- Plan/designs of help facility
- Consider the number of pages in the web site/web space available
- Consider the browser
- Consider the audience/age range of potential users
- Consider the loading time for a page/reduce number or size of pictures/animations
- Consider security needed
- Design types of validation
- Description of validation techniques – e.g. range check (second mark)

Needs a little more than “user friendly”

Implementation issues

- posting it to the internet
- checking the data put in is up to date/(allow details of Pizza etc. to be put in)
- checking the data put in is accurate (proof read, spelling and grammar)
- follows design/user needs
- setting up each page/insert hyperlinks, images,/setting up a “hit” counter
- setting up the security of the website
- setting up validation rules

Testing Issues

- Testing the “test plan”
- Testing hyperlinks and hot spots work within the site
- Customer/Consumer testing of the site/Beta testing
- Testing that links to orders/other web sites work
- Testing e-mail links work
- Testing help facility
- Validation on input fields work
- Correct errors (and retest)
- Whole system testing/check if it works on different platforms (not computers)

Tick each point D/DTP for Design. I for Implementation. T for Testing

Record subtotals for each section at the bottom of the answers (e.g. D-6, I-2, T-2)

Any 1 X 10 . Min of 1 from each section. i.e. could be 8,1,1 for 10

Total 10 marks