



## General Certificate of Secondary Education

# Information and Communication Technology *Specification A*

*3527/H Short Course Tier H*

## 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.

- 1 (a) B F G **Correct answer only** **3 marks**  
 Allow words  
 Digital Camera Joystick Keyboard
- (b) H I L M **Any 3 x1** **Correct answer only** **3 marks**  
 Allow words  
 Laser printer Plotter Screen (VDU) Speakers
- (c) A D J K **Any 3 x1** **Correct answer only** **3 marks**  
 Allow words  
 CD-ROM Hard Disk RAM ROM
- 2 (a) A I **Correct answer only** **2 x 1 mark**
- (b) C E **Correct answer only** **2 x 1 mark**
- (c) F H **Correct answer only** **2 x 1 mark**
- (d) B C D E I J **Any 3 x 1mark each**  
 Allow any answers from these six answers
- 3 (a) F G **Correct answer only** **2 x 1 mark**
- (b) A B J **Correct answer only** **3 x 1 mark**
- (c) C K **Correct answer only** **2 x 1 mark**

- 4 **General Rule** – if field is not labelled as pet or owner, **assume it is the owner.**  
 This would **not** apply if a section is clearly indicated to be **for the pet.** OR where it would benefit the candidate, any fields that come after least 3 pet fields in a row.

\*\*\*\*\* **items assume to be pet**

**NOT “Surname” as already given**

**Owner details**

Title		at least 3
First name/Initials		at least 10/at least 2
Other names		at least 10

**NOTE MAX TWO FOR NAME**

House no./name	at least 1/10	
Street	- Address line 1	at least 10
Town/City/sArea/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 town are mixed up – usually gains one ticks**

Postcode		at least 7
(or clear 3box gap 3 box)		
Telephone number (day)		at least 11
Telephone number (evening)		at least 11
Contact/Emergency tel. Number		at least 11
Mobile tel. Number		at least 11

**NOTE MAX TWO TELEPHONE NUMBERS**

Fax number		at least 11
E-mail address		Memo/at least 20(sensible splits)
Date registered/today’s date		at least 8(2-2-2/4)
(date at end of form is OK)		
Signature		Memo

**NB – not DOB for owner**

**Pet details**

Pet name		at least 10
Pet type/animal	at least 5	
DOB		at least 8(2-2-2/4)
Gender		at least 6 (or coded)
Photo		box to fit
<b>Breed*****</b>		10 characters
<b>Illness details/problems*****</b>		Memo/at least 20
<b>Vaccination details*****</b>		Memo/ at least 20
<b>Date of vaccination/drugs*****</b>		at least 8(2-2-2/4)

\*\*\*\*\* **allow without the word pets**

**NOT age/height/weights**

Boxes only unless memo specified  
 [ ] – open boxes are OK – boxes with small vertical lines are OK but dashes are NOT.  
 Memo = lines/dashes/large box/dots                      IGNORE FILLING IN  
**Mark only the first 8 fields (Do not count surname)**  
 Ignore correct duplicate fields e.g. 3<sup>rd</sup> telephone number – these do not count in the EIGHT  
 Tick correct field name – do not penalise lack of capitals  
 Tick correct no. of boxes/memo field for corresponding field name.  
 Count ticks      - divide by 2      - round down                      **MAX 8 marks**

5	(a)	<b>D12</b>	<b>Correct answer only</b>	<b>1 mark</b>
	(b)	(i) <b>Any from</b> <b>A1, A2, A6, A12</b> <b>B1,B3,B4,B6,B7,B8,B9,B10,B12,B13,B14,B15,B16,B18</b> <b>C1</b> <b>D1, D20</b> <b>E1</b>	<b>Any 1 x 1mark</b>	<b>1 mark</b>
		(ii) <b>C2</b>	<b>Correct answer only</b>	<b>1 mark</b>
		<b>C3</b>	<b>Correct answer only</b>	<b>1 mark</b>
	(iii)	<b>A1 Date/text or both</b>	<b>Correct answer only</b>	<b>1 mark</b>
		<b>D9 number</b>	<b>Correct answer only</b>	<b>1 mark</b>
	(c)	<b>=SUM(E2:E18)</b>	<b>Correct answer only</b>	<b>1 mark</b>
		<b>=SUM(E2:E19)</b>	<b>Correct answer only</b>	<b>1 mark</b>
	(d)	(i) <b>C18</b>	<b>Correct answer only</b>	<b>1 mark</b>
		(ii) <b>E18</b>	<b>Correct answer only</b>	<b>1 mark</b>
		<b>E20</b>	<b>Correct answer only</b>	<b>1 mark</b>
	(e)	<b>Faster to edit/change/alter/amend</b> <b>Neater/easier to edit/change/alter/amend</b> <b>Changes are automatically recalculated in totals.</b> <b>Time saved using replicate/copy down/fill down</b> <b>Validation advantages</b> <b>More accurate/fewer errors (only DTP if related to errors)</b> <b>Re-useable</b> <b>NOT faster/quicker/neater/easier alone</b>	<b>Any 2 x 1 mark</b>	<b>2 marks</b>

- 6 (a) Temperature/heat/thermistor/thermo-couple **Correct answer only** **1 mark**
- (b) Data logging **Correct answer only** **1 mark**
- (c) If one sensor is broken/faulty – still get readings (or idea of broken) average reading  
 One sensor may be in shade or direct sunlight at a given time, giving a “false reading”  
**Any 1 x 1 mark** **1 mark**
- (d) **Human comfort for employees** – could be cold, raining outside, spoil meal times, unsociable hours, safer etc  
**More Accurate readings** – (e.g. reads to more decimal places)  
**Cheaper (with reason)** – save on wages etc.  
**Consistent** - Same results 24/7  
**More frequent/continuous readings**  
**Temperature could be taken in several locations at once**  
**Fewer (human) errors made**  
**Any 2 x 1 mark** **2 marks**
- (e) Allows the readings to be **compared** **1 mark**  
 So the readings are accurate/correct
- NB** – it’s important that the answer gets over the idea that measurement is always relative **UNLESS/UNTIL** it can be compared with other reading when both have been calibrated against the same known/standardised accepted scale.  
**NOT READ THE SAME.**
- 7 (a) Design **Correct answer only** **1 mark**
- Implementation **Correct answer only** **1 mark**
- Testing **Correct answer only** **1 mark**
- Design **Correct answer only** **1 mark**
- Design **Correct answer only** **1 mark**

- 8 (a) (i) **Mistake**  
**M1 - Product code PC047 has a price of 9,999 min 9999**  
**M2 – Number in stock field text instead of number**  
**min Number in stock field text** **any 1 x 1 mark**
- Reason**  
**R1 - Outside of an acceptable range**  
**R1 - Too high when compared to the others**  
**R2 – A field set up to take numbers should be number NOT text**  
**Numbers are left aligned** **any 1 x 1 mark**
- (ii) **Data validation used to check data is reasonable/sensible**  
**Data validation checks data on input so errors reduced**  
**Example of range check/input mask/type check eg up to 3 digits**  
**Any 2 x 1 mark** **2 marks**
- (b) (i) **Product ID** **Correct answer only** **1 mark**
- (ii) **Unique identifier** **1 mark**  
**NOT the most important field**
- (c) (i) **PC040** **Correct answer only** **1 mark**
- (ii) **PC046 AMD 3000** with or without comma **Correct answer only** **1 mark**  
**PC048 Pentium 4** **Correct answer only** **1 mark**
- (d) **List Product ID, Price of each (£)** **Correct answer only** **1 mark**  
**For price of each (£) greater than (or equals) 298/299**  
**Correct answer only** **1 mark**  
**And Price of each (£) Less than (or equals) 500/499**  
**Correct answer only** **1 mark**  
(either order for lines 2 and 3)

(9) (a) **Any advantage to either shop or customer**

**Advantages to the shop -**

- Fewer staff to pay
- No fancy shop to pay for
- Cheaper to advertise from Web page
- Faster to .....
  - E-mail customers rather than mail them about....
- Create an e-business
- Shorter hours become possible
- Sales at any time of the day 24/7
- Can deal with more people at the same time
- Wider market
- Less shoplifting

**Advantages to the customer**

- Cheaper because company overheads reduced (any named one)
- Can order 24/7
- Can order without leaving the house
- Wider range of products (i.e. US or Japanese versions)
- No transport costs
- Quickly search for items they want
- Common items saved

**NOT** home delivery

**NOT** environmental issue

24/7 sales/orders can only score 2 if clearly qualified for customer and shop

(b) **Disadvantages to shop**

- Local people might not know you are there
- Staff can waste time just surfing the net
- Access/ISP can cost money
- Virus issues (1)
- Hacking issues / fraud
- May cause unemployment – **leading to redundancy payments** - must be clear this applies to the shops
- Fear of buying due to credit card security would cut sales
- Not everyone has access to Internet/computers
- Cost implications of running on-line shop – training/staff/consultancy
- Internet problems/system failure – prevent shop operating

**Disadvantages to the customer**

- Slower to get goods, rather than getting it from a local shop
- Goods may be faulty when they arrive or it's slower to get replacement.
- Danger of fraud/hacking credit card details given on-line/identity theft
- Restricted access if computer broken/no computer or internet access
- Harder to check the reliability of the company, rather than a local store.
- Not feel a personal service
- Loss or damage in transit
- Need to have credit/debit card/paypal account
- Cant try out/see goods
- Danger of viruses (1)

**Hacking/fraud, viruses, internet accessibility can only score 2 if clearly qualified for customer and shop**