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Centre Number		Candidate Number	
Candidate Signature			

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General Certificate of Secondary Education
June 2006



**INFORMATION AND COMMUNICATION TECHNOLOGY 3527/H
(SPECIFICATION A) (SHORT COURSE)
Higher Tier**

H

Tuesday 23 May 2006 1.30 pm to 3.00 pm

You will need no other materials.
You may use a calculator.

Time allowed: 1 hour 30 minutes

Instructions

- Use blue or black ink or ball-point pen.
- Fill in the boxes at the top of this page.
- Answer **all** questions.
- Answer the questions in the spaces provided.
- Do all rough work in this book. Cross through any work you do not want marked.

Information

- The maximum mark for this paper is 80.
- The marks for questions are shown in brackets.
- You are reminded of the need for good English and clear presentation in your answers.

For Examiner's Use			
Number	Mark	Number	Mark
1		6	
2		7	
3		8	
4		9	
5			
Total (Column 1) →			
Total (Column 2) →			
TOTAL			
Examiner's Initials			

Answer **all** questions in the spaces provided.

1 Choose your answers from the **list given below**. Write the letters for the answers in the spaces given.

- A** CD-ROM
- B** Digital Camera
- C** Hardware
- D** Hard disk
- E** Internet
- F** Joystick
- G** Keyboard
- H** Laser Printer
- I** Plotter
- J** RAM
- K** ROM
- L** Screen (VDU)
- M** Speakers

(a) Which **three** of the above are input devices?

Answers (3 marks)

(b) Give **three** of the above which are output devices.

Answers (3 marks)

(c) Give **three** of the above which are storage media.

Answers (3 marks)

2 Choose your answers from the **list given below**. Write the letters for the answers in the spaces given.

- A Alteration of margins and spacing
- B Complex searches on two or more criteria
- C Construction of bar-charts and pie-charts from tables of data
- D Formatting of cells
- E Number scales on axis to be edited
- F Sections of a picture to be copied, reflected and scaled
- G Tables to be linked together
- H Use of brushes
- I Use of tabulation
- J Validation of data

(a) Which **two** of the above are important features that any word processing package should allow?

Answers (2 marks)

(b) Which **two** of the above are important features that a charts package should allow?

Answers (2 marks)

(c) Which **two** of the above are important features that a graphics package should allow?

Answers (2 marks)

(d) Give **three** of the above which are important features that any spreadsheet package should allow.

Answers (3 marks)

9

Turn over for the next question

Turn over ▶

3 Choose your answers from the **list given below**. Write the letters for the answers in the spaces given.

- A Data is obtained for specified and lawful purposes
- B Data is accurate and up-to-date
- C Data where national security is concerned
- D Data is never to be given to anyone
- E Data must not be more than six months old
- F Data about individuals must be sent on request
- G Data can be prevented from being used for direct marketing
- H Data individuals want removed from their record must be removed
- I Data is not to be transferred outside the UK
- J Data is to be kept secure against loss or unauthorised processing
- K Data used for health, education and social work

(a) Which **two** of the above are rights the 1998 Data Protection Act gives to data **subjects**?

Answers (2 marks)

(b) Which **three** of the above are responsibilities placed on data **users** by the 1998 Data Protection Act?

Answers (3 marks)

(c) Which **two** of the above are exemptions from the 1998 Data Protection Act?

Answers (2 marks)

7

- 4 In the space below, finish the design of a data capture form for pet owners at Park View Veterinary Surgery. Care should be taken to include suitable fields and enough space to fill in the required details.

Park View Veterinary Surgery

Surname

--	--	--	--	--	--	--	--	--	--	--	--

(8 marks)

Turn over ▶

8

- 5 A take away restaurant uses a spreadsheet to help to record each night's takings. Part of this spreadsheet is shown below.

	A	B	C	D	E
1	May 20, 2006	Dish bought	Unit price	Number sold	Takings
2	Starters	Poppadum	£0.20	20	£4.00
3		Onion Bhaji	£1.75	5	£8.75
4		Mixed Kebab	£2.75	3	£8.25
5					
6	Main Dishes	Chicken Tikka	£4.95	12	£59.40
7		Chicken Korma	£4.25	5	£21.25
8		Lamb Bhuna	£5.15	8	£41.20
9		Prawn Curry	£4.75	4	£19.00
10		Vegetable Curry	£3.75	7	£26.25
11					
12	Sundries	Naan Bread	£1.00	15	£15.00
13		Rice	£1.60	30	£48.00
14		Bombay Potato	£1.25	5	£6.25
15		Mixed Pickle	£0.60	2	£1.20
16		Vegetable Bhaji	£2.25	1	£2.25
17					
18		Delivery charge	£1.00	10	£10.00
19					
20				Total Takings	£270.80

- (a) Which cell contains the number of Naan Breads sold?

.....

(1 mark)

- (b) (i) The cells in this spreadsheet contain different types of information. For example, the cell B2 contains text. Give **one** more cell that contains text.

.....

(1 mark)

- (ii) Tick **two** boxes to show cells which contain currency.

	Tick two boxes
C1	
C2	
C3	
D4	
D5	

(2 marks)

- (iii) currency
date
formulae
number
percentage
text

From the **list given above**, state which cell formats have been used in these cells.

A1

D9

(2 marks)

- (c) Tick **two** boxes to show formulae that could be in cell E20.

	Tick two boxes
=SUM(E2:E4)	
=SUM(E2:E16)	
=SUM(E2:E17)	
=SUM(E2:E18)	
=SUM(E2:E19)	

(2 marks)

- (d) (i) The cost of delivery is increased to £1.50. Name the cell whose contents would have to be changed.

Cell

(1 mark)

- (ii) Name **two** other cells which would change automatically as a result.

Cell 1

Cell 2

(2 marks)

- (e) Give **two** advantages of using a spreadsheet to work out the takings compared with working out the takings by hand.

Advantage 1

.....

Advantage 2

.....

(2 marks)

Turn over ▶

6 A weather station is located on the seafront of a large seaside town.

(a) Name **one** sensor that could be used to take the temperature.

.....
(1 mark)

(b) What is the name given to this automatic process of collecting and recording data at regular fixed intervals?

.....
(1 mark)

(c) Give **one** advantage of the weather station using more than one sensor to record the temperature.

.....
.....
(1 mark)

(d) Give **two** advantages to the weather station of collecting data automatically rather than by hand.

Advantage 1

Advantage 2

(2 marks)

(e) Each sensor used by the weather station has to be calibrated to a known scale before it is used. Explain why this is important.

.....
.....
(2 marks)

7

- 7 Tick **one** box next to each activity listed in the table below to show when it would take place in the development of an ICT system.

		Analysis	Design	Implementation	Testing
(i)	Deciding the features of the software needed				
(ii)	Entering all the records into a database				
(iii)	Entering test data				
(iv)	Planning screen and report layouts				
(v)	Preparing a test plan				

(5 marks)

5

Turn over for the next question

Turn over ▶

8 A shop specialises in selling new and used computers. A database is used to store information on the computers for sale. Part of the database file is shown below.

Product ID	Processor	RAM	Hard disk (size)	Monitor (included)	New or Used	Number in stock	Price of each (£)
PC005	AMD 2200	256 Mb	40 Gb	17 inch SVGA	N	3	399
PC009	AMD 2200	256 Mb	80 Gb	17 inch SVGA	N	2	429
PC012	Celeron 330	256 Mb	80 Gb	None	N	5	299
PC022	Celeron 330	256 Mb	80 Gb	17 inch TFT	N	2	499
PC027	Pentium 3	512 Mb	80 Gb	17 inch TFT	N	10	599
PC029	AMD 1500	128 Mb	20 Gb	15 inch VGA	U	1	199
PC038	AMD 1500	256 Mb	40 Gb	None	U	2	199
PC039	Celeron 200	128 Mb	10 Gb	None	U	1	129
PC040	Pentium 4	512 Mb	160 Gb	15 inch LCD TFT	N	6	799
PC042	AMD 3000	512 Mb	160 Gb	15 inch LCD TFT	N	4	699
PC046	AMD 3000	1 Gb	200 Gb	None	N	8	649
PC047	Celeron 200	128 Mb	8 Gb	15 inch VGA	U	1	9999
PC048	Pentium 4	1 Gb	200 Gb	15 inch LCD TFT	N	5	899
PC049	Pentium 2	64 Mb	10 Gb	None	U	5	99

(a) (i) The database contains an obvious mistake. State what this mistake is, and give a reason why you think it is a mistake.

Mistake.....

Reason.....

(2 marks)

(ii) Explain how data validation could have been used to prevent this mistake.

(2 marks)

(b) (i) Which is the **key field** in this database file?

(1 mark)

(ii) Explain why the field you have chosen is suitable to be used as a key field.

(1 mark)

(c) In order to search the database, the following commands are used.

- List**
- For**
- Equals**
- Greater than**
- Less than**
- And**
- Or**

So the search

List Product ID For RAM Equals 1 Gb

would produce the result

PC046

PC048

What would be the result of the following searches?

(i) **List Product ID For Number in stock Equals 6.**

.....

.....

(1 mark)

(ii) **List Product ID, Processor For Hard disk (size) Greater than 190 Gb.**

.....

.....

(2 marks)

(d) Write down the instructions needed to produce a list of Product ID and Price of each (£), where the price of the computer is between £299 and £499.

.....

.....

.....

(3 marks)

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