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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 3521/F  
(SPECIFICATION A)(FULL COURSE)  
Foundation Tier**

**F**



Tuesday 23 May 2006 1.30 pm to 3.00 pm

<p><b>You will need no other materials.</b> You may use a calculator.</p>
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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** 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)

- 2 (a) Each piece of hardware in the table below is either an input, output or storage device. For **each**, put a tick in the correct box. As an example, a keyboard is an input device so a tick is placed in the Input column.

Tick **one** box only for each device.

	Device	Input	Output	Storage
	Keyboard	✓		
(i)	CD-ROM drive			
(ii)	Digital camera			
(iii)	Graphics digitiser			
(iv)	Hard disk drive			
(v)	Laser printer			
(vi)	Light pen			
(vii)	Monitor			
(viii)	OMR reader			
(ix)	RAM			
(x)	Touch pad			

(10 marks)

- (b) Some storage devices have volatile memory. Explain what is meant by the term volatile.

.....

.....

(1 mark)

**Turn over for the next question**

**Turn over ▶**

- 3 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		<b>Dish bought</b>	<b>Unit price</b>	<b>Number sold</b>	<b>Takings</b>
2	<b>Starters</b>	Poppadum	£0.20	20	£4.00
3		Onion Bhaji	£1.75	5	£8.75
4		Mixed Kebab	£2.75	3	£8.25
5					
6	<b>Main Dishes</b>	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	<b>Sundries</b>	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				<b>Total Takings</b>	<b>£270.80</b>

- (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 <b>two</b> boxes
C1	
C2	
C3	
D4	
D5	

(2 marks)

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

	Tick <b>two</b> 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 for the next question**

**Turn over** ▶

- 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)

8

5 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)

5
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**Turn over for the next question**

**Turn over ▶**

6 A company sells video games on the Internet.

(a) Tick **three** boxes to show which of the following are advantages to the company of selling video games on-line rather than from a shop.

	Tick <b>three</b> boxes
Cheaper because they do not have any staff to pay	
Cheaper because they get the games free	
Cheaper because they do not have to rent and equip a high street shop	
Gives them access to a world wide market rather than a local one	
Gives them access to people over the age of 18	
Gives their customers 24-hour access	

*(3 marks)*

(b) Give **two** disadvantages to the **company** of selling video games on-line rather than from a shop.

Disadvantage 1 .....

.....

.....

Disadvantage 2 .....

.....

.....

*(2 marks)*

(c) Give **two** disadvantages to the **customer** of buying video games on-line rather than from a shop.

Disadvantage 1 .....

.....

.....

Disadvantage 2 .....

.....

.....

*(2 marks)*



7 (a) Tick **one** box next to each activity listed in the table below to show the stage of the system life cycle during which it would take place.

	Analysis	Design	Implementation	Testing	Evaluation
(i) Carrying out a feasibility study					
(ii) Deciding the features of the software needed					
(iii) Entering all the records into a database					
(iv) Entering test data					
(v) Identifying the problems that need solving					
(vi) Planning screen and report layouts					
(vii) Preparing a test plan					
(viii) Reviewing how well the new system works					
(ix) Setting up performance criteria					
(x) Suggesting future improvements to the new system					

(10 marks)

(b) Using the words from the list below fill in the gaps in the paragraph that follows.

- |          |           |          |
|----------|-----------|----------|
| correct  | people    | sensible |
| hardware | processed | software |
| input    | output    | wrong    |

Data validation is the process of checking data when it is ..... ,  
using ..... to make sure it is .....

(3 marks)

(c) Name **two** data validation checks.

1 .....

2 .....

(2 marks)

- 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) 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)

- (b) How many **records** are shown in this database file?

.....  
(1 mark)

- (c) How many **fields** are shown in this database file?

.....  
(1 mark)

- (d) (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)

(e) 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 search?

**List Product ID For Number in stock Equals 6.**

.....

.....

*(1 mark)*

(f) A code has been used to show whether the computer is new or used.

(i) Tick **two** boxes to show the advantages of coding the data.

	Tick <b>two</b> boxes only
It uses more numbers than letters	
It makes it difficult for hackers to access information	
It takes less time to enter data	
It takes up less storage space	
It can be used by anyone	

*(2 marks)*

(ii) Give **one** disadvantage of coding data.

Disadvantage .....

.....

*(1 mark)*

9 A computerised job search facility is going to be installed in an employment agency. The system will have a graphical user interface (GUI).

- (a) Which **three** of the following are important factors that should be considered when designing the new interface?

	Tick <b>three</b> boxes
Availability of help	
Consistency of layout	
How many jobs are available	
The age of the person looking for a job	
The starting salary for each job	
Use of colour and sound	

(3 marks)

- (b) Give **one** advantage of using a graphical user interface.

.....

.....

(1 mark)

4
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**END OF QUESTIONS**