

Surname		Other Names	
Centre Number		Candidate Number	
Candidate Signature			

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General Certificate of Secondary Education  
June 2009



**INFORMATION AND COMMUNICATION TECHNOLOGY 3521/F**  
**(SPECIFICATION A) (FULL COURSE)**  
**Foundation Tier**  
**Written paper**

**F**

Tuesday 19 May 2009 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 black ink or black ball-point pen.
- Fill in the boxes at the top of this page.
- Answer **all** questions.
- You must answer the questions in the spaces provided. **Answers written in margins or on blank pages will not be marked.**
- Do all rough work in this book. Cross through any work you do not want to be 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.

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Question	Mark	Question	Mark
1		10	
2		11	
3		12	
4		13	
5		14	
6		15	
7		16	
8		17	
9			
Total (Column 1)		→	
Total (Column 2)		→	
TOTAL			
Examiner's Initials			



J U N 0 9 3 5 2 1 F 0 1

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

For Questions 1 to 5, write the letter for each answer in the box given.

1 From the list given below, write the letter or letters for each answer in the space given.

- A CD-ROM drive
- B Graphics digitiser
- C Hard disk drive
- D Laser printer
- E Light pen
- F Modem
- G Monitor
- H Mouse

1 (a) Choose **two** of the above that are input devices.

Answers

(2 marks)

1 (b) Choose **one** of the above that is an output device.

Answer

(1 mark)

1 (c) Choose **two** of the above that are storage devices.

Answers

(2 marks)

1 (d) Choose **one** of the above that is **NOT** an input, output or storage device.

Answer

(1 mark)

6



2 Which software packages would be the **best** to use for the following tasks? Write the letter for each answer in the space given.

2 (a) For a school to create a newsletter to send to parents each term

- A database management
- B spreadsheet
- C web design
- D desktop publishing
- E drawing

Answer

(1 mark)

2 (b) For a student to store and organise details of a large CD collection

- A database management
- B spreadsheet
- C web design
- D desktop publishing
- E drawing

Answer

(1 mark)

2 (c) For a small hotel to calculate the bills for guests

- A database management
- B spreadsheet
- C web design
- D desktop publishing
- E drawing

Answer

(1 mark)

2 (d) For a shop selling DVDs to advertise their products on the Internet

- A database management
- B modelling
- C web design
- D desktop publishing
- E drawing

Answer

(1 mark)

4
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Turn over ▶



3 What do the following abbreviations stand for? Write the letter for each answer in the space given.

3 (a) ROM

- A Read Online Memory
- B Reduced Online Memory
- C Reduced Only Memory
- D Read Only Memory
- E Right Only Memory

Answer

(1 mark)

3 (b) WAN

- A Worldwide Accessible Network
- B Wide Area Network
- C Wireless Accessible Network
- D Web Area Network
- E Web Accessible Network

Answer

(1 mark)

3 (c) LAN

- A Local Accessible Network
- B Local Area Network
- C Linked Accessible Network
- D Linked Area Network
- E Live Accessible Network

Answer

(1 mark)

3
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4 In each part of this question, which term **best** matches the definition given? Choose your answers from the list given below. Write the letter for each answer in the space given.

- A Calibrate
- B Data logging
- C Feedback
- D Logging interval
- E Mouse
- F Period of logging
- G Sensor

4 (a) An input device used to measure environmental conditions

Answer

(1 mark)

4 (b) The collecting and storing of data at regular, fixed intervals over a period of time

Answer

(1 mark)

4 (c) The time between the first reading being taken and the last reading being taken

Answer

(1 mark)

4 (d) To match the readings of a sensor with those of a known standard

Answer

(1 mark)

4

**Turn over for the next question**

**Turn over ▶**



5 (a) Which **one** of the following could be used as a **physical** method to prevent unauthorised access to information stored on a computer system?

- A virus check
- B password
- C lock on the computer room
- D data logging
- E data capture forms

Answer

(1 mark)

5 (b) Which **one** of the following could be used as a **software** method to prevent unauthorised access to information stored on a computer system?

- A virus check
- B password
- C lock on the computer room
- D data logging
- E data capture forms

Answer

(1 mark)

2



6 WizzyWorks is a company that produces websites for other companies. Its web designers usually work from home, but once a week they travel by car to the firm's head office in a large town.

6 (a) Tick **two** boxes to show the **advantages** to the web designers of working at home rather than at the company's head office.

	Tick <b>two</b> boxes only
They can start work at 9 am	
They can use a computer at home	
They do not have to spend money on travelling to work each day	
They do not have to spend time travelling to work each day	
They do not have to plan their work	

(2 marks)

6 (b) Tick **two** boxes to show the **disadvantages** to the web designers of working at home rather than at the company's head office.

	Tick <b>two</b> boxes only
They cannot start work until 9 am	
Work can take longer as it is easier to be distracted at home	
The work is more boring at home	
They will not get a lunch hour when working from home	
They feel out of touch with those who work at head office every day	

(2 marks)

4
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**Turn over for the next question**

**Turn over ▶**



- 7 A high street shop that sells DVDs and computer games offers a 10% discount to customers who join their membership scheme.

In the space below, complete the design of a Data Capture Form for people applying to join the shop's membership scheme. Care should be taken to include suitable fields and enough space to fill in their details.

Surname 

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

First name 

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

Address 1 

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

Address 2 

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

Address 3 

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

(4 marks)

4





- 8 Lancre Theme Park has decided to produce a leaflet to attract more customers. They have used a Desktop Publishing package to produce the leaflet shown below.

## Lancre Theme Park

20 new and exciting rides for 2009

Over 80 rides available every day

Open daily from 20<sup>th</sup> April 2009 until 20<sup>th</sup> October 2009.

Entrance fee

Children under 16 only

£7.99

Adults

£9.99

10 food outlets

Wide variety of shops

Telephone 0123 8989898 or email [park.admin@lancreconnet.com](mailto:park.admin@lancreconnet.com) for more details or group reservations

- 8 (a) Give **one** feature of the software that has been used to make the heading 'Lancre Theme Park' stand out.

Feature used .....  
(1 mark)

- 8 (b) Give **one** other feature of the software that could be used to make the sub-heading 'Entrance fee' stand out.

Other feature .....  
(1 mark)

- 8 (c) Give **three** other features of the software that could be used to improve the appearance of the rest of the leaflet.

Feature 1 .....

Feature 2 .....

Feature 3 .....

(3 marks)



9 The 1998 Data Protection Act was introduced to help protect people's right to privacy.

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

From the list (A to I) above, write the letter for each answer in the space given.

9 (a) Give **two** responsibilities placed on data users by the 1998 Data Protection Act.

Responsibility 1

Responsibility 2

(2 marks)

9 (b) Give **one** right the 1998 Data Protection Act gives to data subjects.

Right of data subject

(1 mark)

9 (c) Give **one** exemption from the 1998 Data Protection Act.

Exemption

(1 mark)

4
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**Turn over for the next question**

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ANSWER IN THE SPACES PROVIDED**

**Turn over ▶**



- 10 Betabookz is a company that sells books, CDs and other related items online. Part of its stock database file is shown below.

Stock Number	Item Name	Type of Item	Number in Stock	Selling Price
A1002	The End	Bk	14	£9.99
A1009	Best of the Eagles	CD	12	£7.99
A1013	Super Mario 4	Gm	23	£29.99
A1024	Last Attack	Gm	19	£32.99
A1028	Best of the Beatles	CD	15	£11.99
A1032	Guinness Book of Records	Bk	20	£15.99
A1033	Chaos	Bk	7	£11.99
A1035	Hannah	Bk	5	£3.99
A1037	Bat Out of Hell 2	CD	10	£6.99

- 10 (a) Which is the key field in this database table?

.....  
(1 mark)

- 10 (b) A member of staff tries to add this incorrect record to the database.

Stock Number	Item Name	Type of Item	Number in Stock	Selling Price
A1002	Sign of Four	Bk	5	£5.99

- 10 (b) (i) State why this record should be rejected.

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

- 10 (b) (ii) Give **one** method of avoiding this problem.

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



10 (c) A member of staff tries to add this incorrect record to the database.

Stock Number	Item Name	Type of Item	Number in Stock	Selling Price
A1064	My Way	Bk	-3	£7.99

10 (c) (i) State why this record should be rejected.

.....  
 .....

(1 mark)

10 (c) (ii) Tick **one** box to show which of the following is a type of check that would be used to detect that this record is incorrect.

	Tick <b>one</b> box only
Interval data	
Data spelling	
Data validation	
Digital data	
Data logging	

(1 mark)

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

- And
- Or
- Equals
- Less than

Write down the Stock number(s) selected as a result of the following searches.

10 (d) (i) Type of Item **Equals** Gm

.....  
 .....

(1 mark)

10 (d) (ii) Type of Item **Equals** Bk **And** Selling Price **Less than** £9.99

.....  
 .....

(1 mark)

7
---

Turn over ▶



- 11 A family uses a PC to help to plan the costs for a holiday. The first attempt is shown below.

	A	B	C	D	E
1	<b>Family Holiday Plan - 2 weeks self catering</b>				
2					
3					
4		<b>Cost each</b>	<b>Number needed</b>	<b>Total cost per item</b>	
5	Holiday cost per adult	£369.00	2	£738.00	
6	Holiday cost per child	£179.00	2	£358.00	
7	Insurance per adult	£9.99	2	£19.98	
8	Insurance per child	£4.99	2	£9.98	
9	Trips - family cost	£39.99	3	£119.97	
10	Food/meals - family cost per day	£50.00	14	£700.00	
11	Other expenses per day	£25.00	14	£350.00	
12	Petrol costs to the airport	£40.00	1	£40.00	
13	Airport parking (two weeks)	£70.00	1	£70.00	
14					
15					
16		<b>Total cost of holiday</b>		£2,405.93	
17					

- 11 (a) Tick **one** box to show which type of software package has been used to produce this plan.

	Tick <b>one</b> box only
Database	
Graphics	
Spreadsheet	
Word processing	

(1 mark)

- 11 (b) Which cell contains the **total other expenses** for the holiday?

	Tick <b>one</b> box only
A11	
B11	
C11	
D11	

(1 mark)



11 (c) The cells in this spreadsheet have been formatted to contain text, number or currency.  
State which **one** of these is contained in the following cell.

B13.....  
(1 mark)

11 (d) State the formula which would be contained in the following cell.

D16.....  
(1 mark)

11 (e) The family has set a maximum of £2200 to spend on their holiday. Explain clearly how they could use the spreadsheet to investigate ‘what if’ situations to help them keep within their budget.

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

12 From the list given below, choose the term which best matches the description in the left-hand column in the table below. Write your answer in the space provided.

- |                   |                            |                        |
|-------------------|----------------------------|------------------------|
| batch processing  | file dumps                 | real time processing   |
| data validation   | generation of master files | sorting files          |
| data verification | merging files              | transaction processing |
| encryption        |                            |                        |

	Description	Term which best matches the description
(i)	Software used to prevent the use of stolen data	
(ii)	Putting the Transaction file into the same order as the Master file	
(iii)	Process data in time to affect the next input	
(iv)	Keeping previous master files and transaction files in case the current one is lost or corrupted	
(v)	Used for backup of on-line systems	

(5 marks)

6

5

Turn over ▶



- 13** A poster is needed to advertise the Lancre School's musical production of *Grease*. The poster has to contain the following information.

**Name of musical**

*Grease*

**General Details**

Dates – 23<sup>rd</sup> to 25<sup>th</sup> June 2009  
Where – Lancre School Hall  
Time – 7 pm  
Ring Lancre 01238 767676 for more details

**Admission**

Adults – £3  
Child/Seniors – £1.50

- 13** (a) Use the space on the page opposite to design a suitable poster. Care should be taken with the layout of your poster. You do not need to colour in your design. (3 marks)
- 13** (b) Label your design to show where you would use each of the following features:
- coloured text  
importing clip art. (2 marks)
- 13** (c) Add notes to your design to say why you have used each of the above features in the way you have shown. (2 marks)







**Turn over for the next question**

**Turn over ▶**

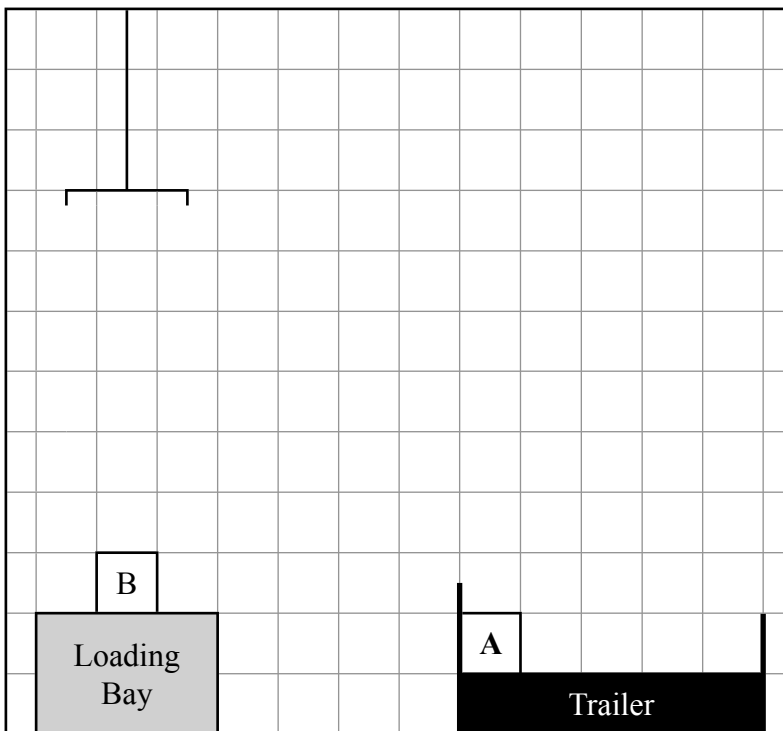
7
---



14 A computer system is used to control a crane that puts boxes on to trailers. A grip at the end of the crane is used to pick up and put down the boxes. The grip is moved by typing commands into the computer system. Examples of the commands which are used to move the grip are shown below:

RIGHT 4	Move the grip right 4 units
LEFT 1	Move the grip left 1 unit
UP 2	Move the grip up 2 units
DOWN 5	Move the grip down 5 units
CLOSE	Close the grip to pick up the box
OPEN	Open the grip to release the box

Write down the commands needed for the grip to pick up box B and place it on the trailer next to box A. The grip must then return to its original starting position.



Commands

(4 marks)

4
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15 A firm of solicitors is planning to install a new computerised system. Before they start on the computerisation of the new system, they need to collect information about how their present system works and what will be needed in the new system. Two ways in which this information could be collected are interviews and observation of the existing system.

15 (a) Give **one** advantage of each of these methods of collecting the information.

15 (a) (i) Interviews .....  
.....

15 (a) (ii) Observation .....  
.....  
(2 marks)

15 (b) (i) Name **one** other method by which this information would normally be collected.  
.....  
(1 mark)

15 (b) (ii) Give **one** advantage of this method.  
.....  
.....  
(1 mark)

15 (c) (i) The firm's new system must have a suitable user interface. Which **one** of the following is an important factor to be considered when designing the new interface?

	Tick <b>one</b> box only
The fees charged by the solicitors	
The cost of the computers	
Help facilities	

(1 mark)

15 (c) (ii) Give **one** other important factor that should be considered when designing the new interface.  
.....  
.....  
(1 mark)

6

Turn over ▶



16 A health club uses a computer system to store information about the club’s members on a database.

16 (a) Explain what is meant by the following terms. You may find it helpful to give an example.

16 (a) (i) Field .....  
.....

16 (a) (ii) Record .....  
.....

(2 marks)

16 (b) Which **one** of the following would be a **disadvantage** to the health club in using a database to store the information rather than storing the information on paper in filing cabinets?

	Tick <b>one</b> box only
Staff could work more flexible hours	
The health club could open for longer hours	
Staff would need training	

(1 mark)

16 (c) Give **two advantages** to the health club in using a database to store the information rather than storing the information on paper in filing cabinets.

Advantage 1 .....  
.....

Advantage 2 .....  
.....

(2 marks)

5



17 Operating systems are used by all computer systems.

17 (a) Are operating systems hardware or software?

.....  
(1 mark)

17 (b) In the table below, tick **two** boxes to show tasks that are carried out by all operating systems.

	Tick <b>two</b> boxes only
Checks the spelling in word processed documents	
Manages the allocation of CPU time	
Detects the use of wrong formulae in a spreadsheet	
Detects a virus is being downloaded from the Internet	
Manages the system security	

(2 marks)

17 (c) Name **one** type of operating system.

.....  
(1 mark)

**END OF QUESTIONS**

4
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