

Surname		Other Names	
Centre Number		Candidate Number	
Candidate Signature			

For Examiner's Use

General Certificate of Secondary Education
June 2008

**INFORMATION AND COMMUNICATION TECHNOLOGY 3528/F
(SPECIFICATION B) (SHORT COURSE)
Foundation Tier**

F



Tuesday 20 May 2008 1.30 pm to 2.30 pm

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

Time allowed: 1 hour

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 60.
- 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			
Question	Mark	Question	Mark
1		5	
2		6	
3		7	
4		8	
Total (Column 1) →			
Total (Column 2) →			
TOTAL			
Examiner's Initials			



3528/F

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

- 1 A graphic designer has been asked to produce a range of stationery for the TXC company. The graphic designer produces a draft of what a letter from the company could look like.

TXC

Unit 13, Croydon Trading Estate, Gallway SD14 9NM

←-----→

Dear Xxxxxxx,

Xxxxx xxxxxxxxxxx xxxxxx x xxxxxxxxxxxxxxx x
 xxxxxxx xxxxx xxxxxxxxxxx xxxxxxx xxxxxxxxxxx
 xxxxxxxxxxxxxx xxxxxxxx xxxxxxxxxxxxxxx

Xxxxx xxxxxxxxxxx xxxxxx x xxxxxxxxxxxxxxx x
 xxxx xxx xxxxx xxxxxxxxxxx xxxxxxx xxxxxxxxxxx
 xxxxxxxxxxxxxx xxxx xxxxx xxxxxxxxxxxxxxx

Xxxxx xxxxxxxxxxx xxxxxx x xxxxxxxxxxxxxxx x
 xxxxxxx xxxxx xxxxxxxxxxx xxxxxxx xxxxxxxxxxx
 xxxxxxxxxxxxxx xxxxxxxx xxxxxxxxxxxxxxx

Yours sincerely,
Mandy Shuttleworth
 Mandy Shuttleworth
 Operations Manager

A

B

- 1 (a) Complete the sentences using words from this list:

- centred
- left justified
- airbrushed
- right justified
- indented

1 (a) (i) The logo at **A** is (1 mark)

1 (a) (ii) The text at **B** is (1 mark)



- 1 (b) The TXC logo at A will be reproduced in a lighter colour, enlarged and repeated to produce this pattern.



Complete the sentences using words from this list:

selection
rotate
fill
airbrush
pencil

- 1 (b) (i) The TXC logo can be repeated using the
tool followed by copy and paste. (1 mark)

- 1 (b) (ii) The colour of the TXC logo can be changed using
the tool. (1 mark)

Question 1 continues on the next page

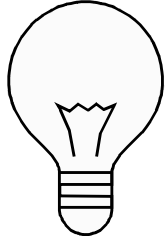
Turn over ▶



1 (c) Name each of the following using words from this list:

art shape
autoshape
clip art
cut art
extreme art
word art

1 (c) (i)



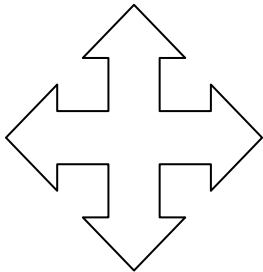
Name:
(1 mark)

1 (c) (ii)



Name:
(1 mark)

1 (c) (iii)



Name:
(1 mark)

7



2 A student has a desktop computer at home. The desktop computer system includes the following.

2 (a)

Label	
A	printer
B	mouse
C	screen
D	scanner
E	keyboard

Label	
F	processor box
G	hard disk drive
H	DVD drive
I	modem
J	flash memory stick

2 (a) (i) Write down the labels of **two** input devices. Write **one** label in each box.

Input device 1:

Input device 2:

(2 marks)

2 (a) (ii) Write down the labels of **two** output devices. Write **one** label in each box.

Output device 1:

Output device 2:

(2 marks)

2 (a) (iii) Write in the box the label of **one** backing storage device.

(1 mark)

2 (a) (iv) Write in the box the label of the part of the computer that is needed to access the Internet.

(1 mark)

2 (b) Tick **one** box to show how to increase the speed at which the student's computer can access the Internet.

	Tick one box
Upgrade the keyboard	<input type="checkbox"/>
Use a multifunction scanner, printer and copier	<input type="checkbox"/>
Use a different search engine	<input type="checkbox"/>
Upgrade the modem	<input type="checkbox"/>
Use a joystick	<input type="checkbox"/>

(1 mark)

7

Turn over ▶



- 3 A finance officer uses a spreadsheet to record sales from an equipment shop. This is part of the spreadsheet.

	A	B	C	D
1	Sales	13/06/2008		
2				
3	Description	Price	Quantity Sold	Sales Value
4	Trolley jack	£24.50	6	£147.00
5	Digital thermometer	£70.00	5	£350.00
6	Generator	£500.00	3	£1500.00
7	Pressure washer	£120.25	4	£481.00
8	Drill	£55.00	10	£550.00
9				
10			Total Sales Value =	£3,028.00

- 3 (a) The cells in the spreadsheet contain different types of data. Complete the sentences using words from this list:

text
an equation
currency
a formula
a calculation

3 (a) (i) The content of cell A5 is (1 mark)

3 (a) (ii) The content of cell D5 is (1 mark)

3 (b)

Label	Formula
A	=SUM(D4:D10)
B	=B7*C7
C	=C6*D6
D	=SUM(D4:D8)
E	=A7*B7*C7

Write in the box the label of the formula in cell D7.

(1 mark)



3 (c) The price of a generator is reduced to £400.00.

3 (c) (i) Describe how the spreadsheet should be edited.

.....

.....

.....

.....

(2 marks)

3 (c) (ii) When the spreadsheet was edited, the values displayed in some cells changed automatically.

Write in the box the cell reference of **one** cell that changed automatically.

(1 mark)

3 (c) (iii) Tick **one** box to show why a cell would change automatically when another cell is edited.

	Tick one box
Spreadsheet cells are all linked	
The cell contains a formula that refers to the other cell	
All the cells know what is happening in other cells	
The cell contains a description that refers to the other cell	
The spreadsheet contains a graph	

(1 mark)

3 (d) The finance officer uses the spreadsheet to generate different types of graph.

Write down the type of graph, using words from this list:

- scatter
- pie
- bar (or column)
- line
- stem and leaf

Type of graph:

.....



(1 mark)

8

Turn over ▶



- 4 A Jazz Band uses a database to keep membership records. This is a part of the database.

Name	MemberNumber	Instrument
Hassini	2015	Guitar
Milner	0365	Saxophone
Flanagan	0112	Clarinet
Afzal	8231	Piano
Jowett	0112	Clarinet

- 4 (a) Complete the sentence using a word from this list:

player
record
code
field
file

All the data about a member is called a

(1 mark)

- 4 (b) Tick **one** box to show other data about each member that should be included.

	Tick one box
Telephone number	
Age	
A member's bank balance	
Weight	
Height	

(1 mark)

- 4 (c) The **MemberNumber** 0112 is used twice.

- 4 (c) (i) Tick **one** box to show why this must be a mistake.

	Tick one box
All members who play the same instrument must have the same MemberNumber	
MemberNumber is the key field	
The key field must be a number	
The key field must be repeated	
All members with the same name must have the same MemberNumber	

(1 mark)

- 4 (c) (ii) Write down a valid **MemberNumber** for Jowett.

.....

(1 mark)



- 4 (d) A questionnaire is to be designed for new members to fill in when they join the band. The questionnaire will be used for data capture. The data written on the questionnaire will be input to the computer.

Design the questionnaire.

(4 marks)

8

Turn over ▶

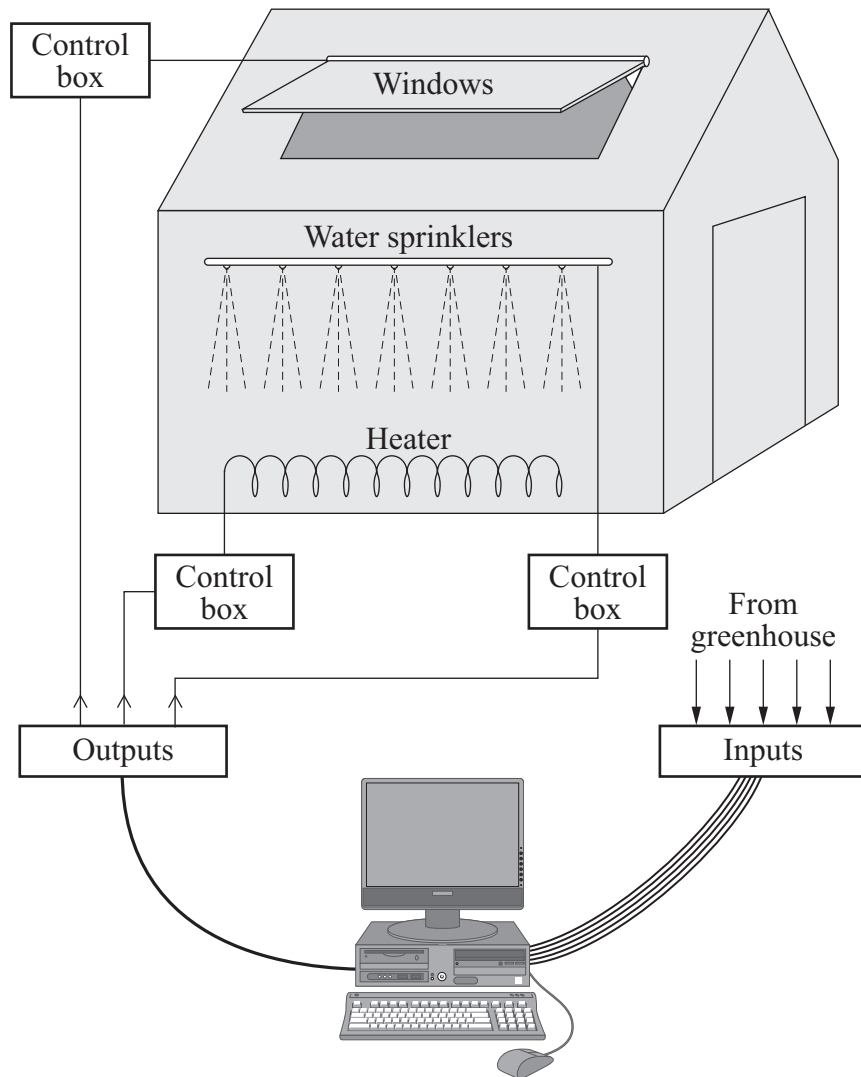


- 5 A garden centre uses a computer controlled greenhouse to grow plants. The computer is in the garden centre office which is remote from the greenhouse.

The computer can:

- turn the heater on or off
- turn the water sprinklers on or off
- open or close the windows.

The plants will die if the temperature is too hot or too cold, or the humidity is too wet or too dry.



- 5 (a) Tick **one** box to show what the computer can do to make the greenhouse hotter.

	Tick one box
Turn the heater off	
Open the windows	
Close the door	
Turn the heater on	
Plant tomatoes in the greenhouse	

(1 mark)

- 5 (b) Tick **one** box to show what the computer must know in order to control the greenhouse so the plants will grow.

	Tick one box
The best way to build a greenhouse	
The best temperature for plant growth	
The best amount of water in the swimming pool	
How often to open the windows	
The best amount of daylight for plant growth	

(1 mark)

- 5 (c) Tick **one** box to show what data must be input to the computer from the greenhouse.

	Tick one box
The temperature in the greenhouse	
The temperature outside the greenhouse	
Whether it is raining	
Whether the sun is shining	
The amount of water in the swimming pool	

(1 mark)

Question 5 continues on the next page

Turn over ▶



5 (d) Complete the sentence using words from this list:

- actuators
- tractors
- agricultural workers
- sensors
- digital cameras

To collect data from the greenhouse, the computer uses
(1 mark)

5 (e) Tick **three** boxes to show the advantages to the garden centre in using a computer controlled greenhouse.

	Tick three boxes
The growing conditions are always the best	
The greenhouse is monitored all day every day	
The soil in the greenhouse is sterilised regularly	
There is less wastage of water and heating than with manual systems	
The stock control system is automated	
It is more expensive to install a computer control system	

(3 marks)

7



- 6 (a) Complete the sentence using words from this list:
 the application software
 a dialogue box
 an icon
 the keyboard
 the operating system

A spreadsheet can be opened by double clicking on
 (1 mark)

- 6 (b) Data is entered into the computer from a questionnaire. This data is verified and then validated.

- 6 (b) (i) Tick **one** box to show a verification check.

	Tick one box
One person enters the data from the questionnaire; the same person enters the same data again	
The person entering the data looks to see that what is written on the questionnaire is the same as the data displayed on the screen	
A table lookup can be used, for example, to check spelling	
A type check can be used, for example, to check there are no numbers in someone's name	
The person who filled in the questionnaire is asked to sign it	

(1 mark)

Question 6 continues on the next page

Turn over ▶



- 6 (b) (ii) Tick **one** box to show the purpose of verification.

	Tick one box
To make sure that the data entered into the computer is the same as the data on the questionnaire	
To make sure that the data entered into the computer is numeric	
To make sure that the data written on the questionnaire is accurate	
To make sure that the data entered into the computer is realistic	
None of the above	

(1 mark)

- 6 (c) The technician is testing a spreadsheet. A range check has been set up to accept numbers within the range 0 to 10.

Tick **three** boxes to show tests that should be done and their expected outcome.

	Tick three boxes
Enter the letter B and this is accepted	
Enter the number -6 and this is accepted	
Enter the number 15 and this is accepted	
Enter the number 12 and this is rejected	
Enter the number 4 and this is accepted	
Enter the number 0 and this is accepted	

(3 marks)



- 6 (d) A desktop computer is not working properly and a technician has been asked to repair it. The technician sets up the computer and switches on the power at the electric socket. The screen remains blank and does not show any activity.

Tick **two** boxes to show what the technician should check.

	Tick two boxes
The zip drive has a disk in it	
The computer has a DVD drive	
The screen has been switched on	
All the cables are firmly plugged into the correct sockets	
There are no USB cables plugged into the computer	

(2 marks)

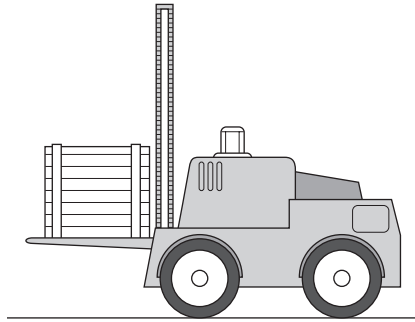
8

Turn over for the next question

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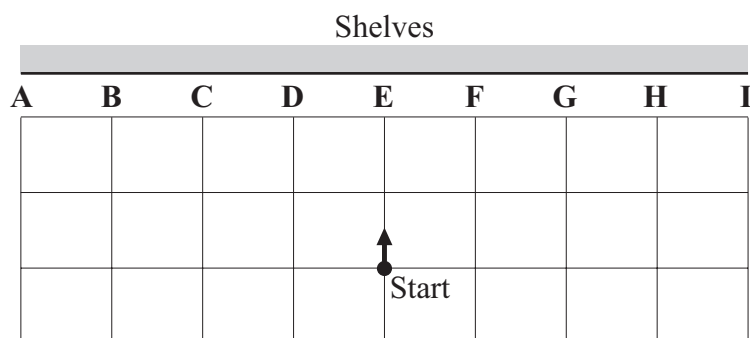
7 A computer controlled fork lift truck is used in a warehouse.



These are examples of instructions that can be used to control the fork lift truck.

Instruction	What the fork lift truck does
L90	Turn left 90 degrees
R90	Turn right 90 degrees
F3	Move forward 3 units
U3	Lift the forks to the third shelf
Push	Move the load onto the shelf
Pull	Take the load off the shelf

This is a floor plan of the warehouse.



Beginning at the Start shown, these instructions make the fork lift truck take the load off the 4th shelf at position H.

F2
R90
F3
L90
U4
Pull



7 (a) Write the instructions so that the fork lift truck puts a load on the 3rd shelf at position C. Begin at the Start shown.

.....
.....
.....
.....
.....
.....

(3 marks)

7 (b) When the fork lift truck was at the Start shown it was given these instructions:

- F2
- L90
- F3
- L90
- U5
- Push

7 (b) (i) Explain why these instructions do not place the load on the 5th shelf at B.

.....
.....

(1 mark)

7 (b) (ii) Describe what happens to the load.

.....
.....

(1 mark)

Question 7 continues on the next page

Turn over ▶



7 (c) Tick **two** boxes to show the effects of using a computer controlled fork lift truck.

	Tick two boxes
Stock checks can be carried out more frequently.	
There are fewer jobs for people if computer controlled fork lift trucks are used	
Goods in the shops will be more expensive	
People in other warehouses may have to work longer for less money to compete with warehouses that use computer controlled fork lift trucks	
A computer controlled fork lift truck is more environmentally friendly	

(2 marks)

7



8 To keep ICT hardware and software up-to-date, it is regularly upgraded. Hardware is often replaced every three years, and software is often replaced more frequently.

8 (a) Tick **two** boxes to show the effects of regularly upgrading ICT software and hardware.

	Tick two boxes
There are more TV channels than there used to be twenty years ago	
Employees are quickly deskilled	
Businesses go bankrupt	
A large quantity of old ICT hardware needs to be disposed of	
Playing computer games improves your ability to concentrate	

(2 marks)

8 (b) Tick **two** boxes to show how businesses can ensure that the development of their ICT systems is sustainable.

	Tick two boxes
Regularly retrain employees	
Sack older employees and give their jobs to new University graduates	
Erect a windmill in the car park to generate electricity for the business	
Do not allow employees to travel to work by car	
Plan spending to allow for regular replacement of hardware and software	

(2 marks)

Question 8 continues on the next page

Turn over ▶



8 (c) Some businesses give old ICT hardware to charities to send to schools in developing countries.

8 (c) (i) Tick **two** boxes to show the advantages of doing this.

	Tick two boxes
Children can go to school every day	
Children can develop the skills needed to modernise their own country	
Children can learn Mathematics	
ICT hardware is used for longer before it is thrown out	
Children can learn Art	

(2 marks)

8 (c) (ii) Tick **two** boxes to show the disadvantages of doing this.

	Tick two boxes
Satellite TV signals cannot be received in developing countries	
Mobile phones cannot be used in developing countries	
Money spent on transporting old ICT hardware may be better spent on providing a clean water supply	
Developing countries use cabled networks rather than wireless networks	
ICT skills may not be useful to children in developing countries as there are few local jobs that require these skills	

(2 marks)

8

END OF QUESTIONS

