

Surname		Other Names	
Centre Number		Candidate Number	
Candidate Signature			

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General Certificate of Secondary Education
June 2004



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

3528/F

Monday 24 May 2004 1.30 pm to 2.30 pm

F

For Examiner's Use	
Number	Mark
1	
2	
3	
4	
5	
6	
7	
8	
TOTAL	
Examiner's Initials	

<p>No additional materials are required. You may use a calculator.</p>

Time allowed: 1 hour

Instructions.

- Use a blue or black ink or ball-point pen.
- Fill in the boxes at the top of this page.
- Answer **all** the questions in the spaces provided.

Information

- The maximum mark for this paper is 60.
- Mark allocations are shown in brackets.

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

1 Roboshop sell robots.

A secretary is writing a letter using wordprocessing software. The letter looks like this.

**Roboshop
Unit 12
Xenon Industrial Estate
Acton
AC1 2DH**

01247 343434

12/05/2004

Dear Mr Pettiford,

Paragraph 1

Alternatively, you could purchase robot R35. This is available immediately from stock. By purchasing robot R35, you would receive a higher specification robot at a lower price.

Paragraph 2

Many thanks for your order for robot R32. This is now out of stock. New stocks will be not available for at least 6 months.

Paragraph 3

Please consider our offer and let me know if you wish to purchase robot R35. I will reserve one of these for you for one week.

Yours sincerely,

J Wood

J Wood

- (a) The secretary is going to rearrange the letter so that Paragraph 1 is between Paragraph 2 and Paragraph 3.

Write the labels of these operations in order to show how the secretary could do this.

Label	Operation
A	paste
B	cut
C	position the cursor between Paragraph 2 and Paragraph 3
D	highlight Paragraph 1

Label

(2 marks)

- (b) The secretary has a picture of a robot that has been saved on disk. The secretary is going to put this picture in the letter. Describe how the picture of the robot can be put into the letter.

.....

.....

.....

.....

(2 marks)

- (c) The secretary wants to send an e-mail to the manufacturer that makes the robots.

Tick **three** boxes to show how the secretary could find out where to send the e-mail.

	Tick three boxes
Look in the telephone book	
Move an e-mail received from the manufacturer to another folder	
Click 'reply' on an e-mail received from the manufacturer	
Use the address book in the e-mail software	
Look at the manufacturer's web site	
Click 'delete' on an e-mail received from the manufacturer	

(3 marks)

- 2 A plumber uses a computer to estimate the cost of refitting a bathroom for a customer. This is part of the information displayed on the monitor.

	A	B	C	D
1	Materials	Unit Cost	Quantity	
2	Bath	£400.00	1	£400.00
3	Bath taps	£100.00	2	£200.00
4	Basin	£90.00	1	£90.00
5	Basin taps	£75.00	2	£150.00
6	Shower unit	£100.00	1	£100.00
7	Copper pipe (2 metres)	£25.00	6	£150.00
8	Total cost of materials			£1090.00
9	Labour costs			£500.00
10	Total cost of materials and Labour			£1590.00
11	VAT at 17.5%			£278.25
12	Total cost to customer			£1868.25

- (a) Tick **one** box to show the type of software the plumber has used.

	Tick one box
multimedia	
graphics	
virus checker	
spreadsheet	
web browser	

(1 mark)

- (b) The type of data in cell reference A5 is text.

- (i) Write the cell reference of another cell that contains text.

.....
(1 mark)

- (ii) Write the formula that would be in cell D3.

.....
(1 mark)

- (c) The plumber is going to buy a new standalone computer to run the software. The plumber looks at adverts in the newspapers to find a suitable computer.

- (i) Name **two** input devices the computer could have.

Input device 1:

Input device 2:

(2 marks)

- (ii) Tick **two** boxes to show backing storage the computer could have.

	Tick two boxes
floppy disk	
modem	
the network	
database	
hard disk	

(2 marks)

- (iii) The plumber buys a scanner.

State **one** task the plumber could do with a scanner.

.....

.....

(1 mark)

8

TURN OVER FOR THE NEXT QUESTION

Turn over ▶

- 3 A hospital keeps information about patients in a database on a computer.
This is part of the database.

Patient Number	Patient Name	Gender	Admission Date	Doctor
0232	McLoughlin	M	07/02/2004	Clarke
0617	Iqbal	F	07/01/2004	Stevens
0825	Morgan	F	20/03/2004	Stevens
0713	Rooney	M	15/03/2004	Clarke
0324	Wrig75	F	04/01/2004	Harrison
0611	Feather	M	17/04/2004	Stevens

The information about a patient is written on a form by the doctor.
The information on the form is input to the computer by a clerk.

- (a) An error has been made. A **Patient Name** has been input incorrectly.

(i) Circle the **Patient Name** that has been input incorrectly. (1 mark)

- (ii) Tick **one** box to show a verification check that should detect this error.

	Tick one box
The clerk inputs the Patient Name then inputs the information on the next form.	
When the Patient Name has been input, the clerk checks again that the Patient Name on the monitor is the same as that on the form.	
The type check is re-calculated when the Patient Name is input.	
The Patient Number is input twice.	
The Patient Name is input by the doctor as the doctor is more accurate than the clerk.	

(1 mark)

- (b) The **Patient Number** is the key field.

Tick **two** boxes to show essential features of a key field.

	Tick two boxes
A key field cannot be empty.	
A key field must have a different value in every record.	
A key field must be in every column in a table.	
A key field must be the same as every other key field in a database.	
A key field must be in every column in a database.	

(2 marks)

- (c) Patients' **Gender** is coded.

Tick **two** boxes to show the advantages of coding information.

	Tick two boxes
The coded information takes up less space on backing storage.	
The coded information is secret.	
The clerk can input the coded information faster.	
The doctor can send the coded information by e-mail.	
Patients do not know what is wrong with them.	

(2 marks)

- (d) Write down the **Patient Names** in the order they would appear after the database has been sorted into ascending order on the **Patient Name** field.

Patient Name

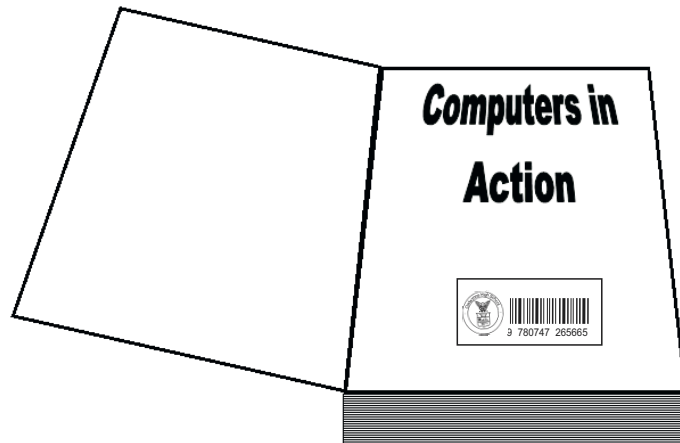
(2 marks)

8

TURN OVER FOR THE NEXT QUESTION

Turn over ►

- 4 Books in a school library are identified by a bar code inside the front cover.



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

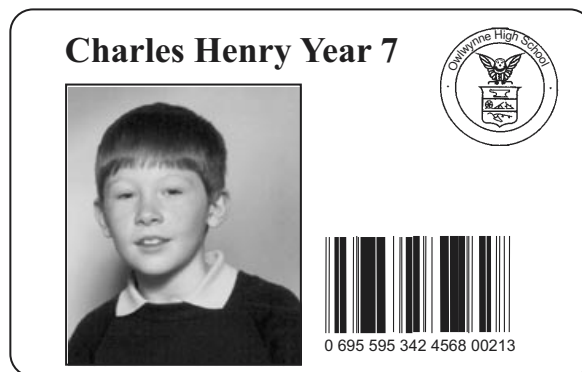
mouse
keyboard
joystick
sensor
bar code reader

Bar codes can be input most accurately using a

If the bar code is damaged, the number printed under the bar code is entered using a

.....
(2 marks)

- (b) Each pupil at the school has a library card.



A pupil borrows a book from the school library.
The librarian scans the bar code on the library card and the bar code on the book.

Tick **one** box to show why the bar code on the library card and the bar code on the book are both scanned when a book is borrowed from the library.

	Tick one box
The library card can be used to collect air miles.	
There is no need to identify the pupil when a book is borrowed.	
Pupils have to review the books they read.	
The bar code on the book identifies the pupil.	
To record who has borrowed a book, both the pupil and the book must be identified.	

(1 mark)

- (c) The library software runs on a LAN (Local Area Network). Users can print book lists.

Draw a labelled diagram of the LAN. You should show on the diagram a fileserver and at least **three** computers connected to the LAN.

(3 marks)

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

parents
librarians
the headteacher
the network manager
the school secretary

Technical documentation could be useful to

User documentation could be helpful to

(2 marks)

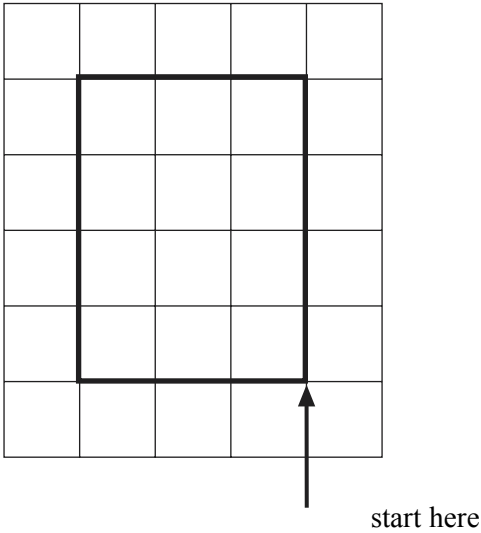
Turn over ►

5 (a) A student writes a program in Logo.

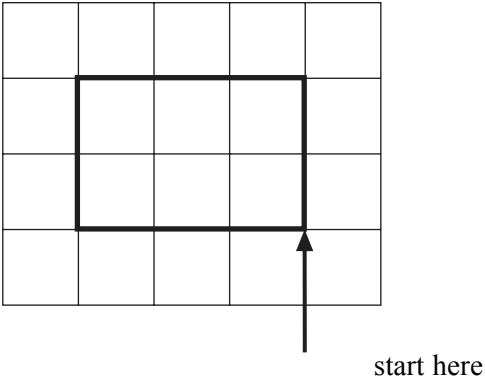
These are examples of Logo instructions.

Instruction	What the instruction does
clearscreen	clears the screen
forward 5	moves the pen forward 5 squares
left 90	turns the direction of the pen ninety degrees to the left
right 45	turns the direction of the pen forty-five degrees to the right

This shape is produced by these Logo instructions. The grid is not produced but is shown to help you.

Display	Logo instructions
	<pre>clearscreen forward 4 left 90 forward 3 left 90 forward 4 left 90 forward 3 left 90</pre>

Write the Logo instructions to produce this shape.

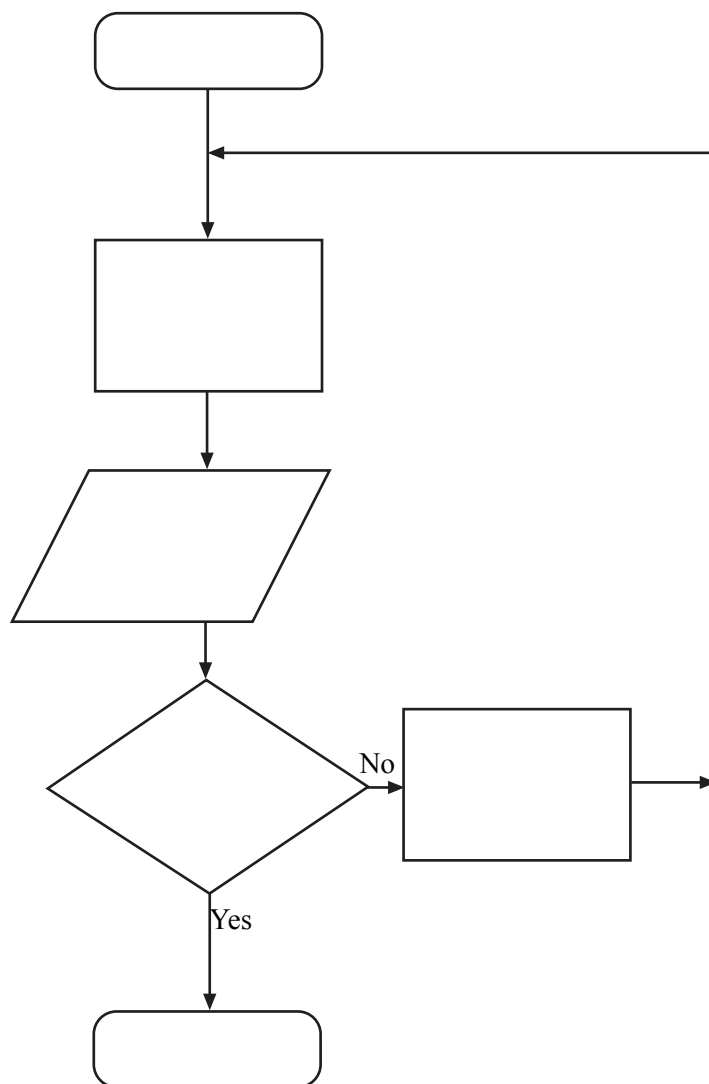
Display	Logo instructions
	<p>.....</p> <p>.....</p> <p>.....</p> <p>.....</p> <p>.....</p> <p>.....</p> <p>.....</p> <p>.....</p> <p>.....</p> <p>.....</p>

(3 marks)

- (b) Some Logo instructions should display a square but they do not work.

Write the labels of these statements in the boxes of the flowchart to show a method of developing and testing the Logo instructions.

Label	Statement
A	Run the Logo instructions
B	Start
C	The picture produced is displayed on the screen
D	End
E	Change the Logo instructions
F	Is the picture a square?



(5 marks)

- 6 (a) When students log on to a network from a computer connected to it, they have to enter a username and a password.

Tick **two** boxes to show sensible rules about passwords.

	Tick two boxes
You should tell your friends your password in case you forget it.	
You should write your username and password in the front of your diary.	
You should never tell anyone else your password.	
You should use your pet's name as a password.	
You should change your password frequently.	

(2 marks)

- (b) A student sometimes saves work on the hard disk of the computer being used on the network.

- (i) Tick **two** boxes to show why this work is not secure.

	Tick two boxes
If there is a virus attack, the computer will not be protected as it is on the second floor.	
If the computer is switched off, all the data in memory is lost.	
If the building burns down, the computer could be destroyed.	
Another student using the computer could delete the work.	
The computer is not constructed to military standard specifications.	

(2 marks)

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

paste
format
copy
field
merge

A backup is a of students' work on backing storage. (1 mark)

- (iii) Describe **one** way students could make a backup of their work.

.....
.....

(1 mark)

- (c) A student downloads some software from the Web and tries to install it on one of the computers on the network.

The computers have been set up so that students are prevented from installing software. Give **one** reason why the computers have been set up in this way.

.....
.....

(1 mark)

7

TURN OVER FOR THE NEXT QUESTION

Turn over ▶

- 7 (a) An accountant uses one computer at home and another computer at work.

The accountant usually works from home, but occasionally travels by car to the firm's head office in a large city.

- (i) Tick **one** box to name this way of working.

	Tick one box
e-commerce	
teleworking	
multimedia	
downloading	
networking	

(1 mark)

- (ii) Tick **two** boxes to show advantages to the accountant of this way of working.

	Tick two boxes
At home, the accountant's working hours are more flexible.	
The firm does not monitor the accountant's work at home, so the accountant does not need to work.	
The accountant will be warmer at work as a hot desk is provided.	
The accountant does not have to waste time travelling to work every day.	
The accountant has the use of a computer at work and a computer at home.	

(2 marks)

- (iii) Tick **two** boxes to show disadvantages to the accountant of this way of working.

	Tick two boxes
This way of working is boring.	
The accountant feels out of touch compared with colleagues who work at the firm's head office every day.	
It can take longer to get work done at home as there can be more distractions.	
The accountant will have to pay more to travel to work.	
The accountant will be provided with out-of-date computer equipment.	

(2 marks)

(b) Describe **one** health hazard due to using a computer, and explain how this could be avoided.

Health hazard:

.....

How to avoid the health hazard:

.....

(2 marks)

7

TURN OVER FOR THE NEXT QUESTION

Turn over ▶

8 Cotex is a mail order company.

(a) Cotex want to sell customers' names and addresses to an advertising agency.

(i) Give **one** reason why an advertising agency would want to buy customers' names and addresses.

.....

.....

(1 mark)

(ii) Give **one** reason why customers might not want Cotex to sell their names and addresses to an advertising agency.

.....

.....

(1 mark)

(iii) Give **one** reason why it could be illegal for Cotex to sell customers' names and addresses to an advertising agency.

.....

.....

(1 mark)

- (b) By mistake, a customer receives a bill for £1 000 000 from Cotex.

The customer telephones Cotex and speaks to a customer services assistant.

- (i) The assistant tells the customer that the computer has made the mistake.
Give **one** reason why it is unlikely that the computer has made the mistake.

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

- (ii) The assistant appears to know the details of every customer that telephones Cotex.
Explain how the assistant can appear to know the details of each customer.

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

- (c) Some people say computers are more intelligent than people.

- (i) Tick **one** box to show something people can do that computers cannot do.

	Tick one box
Print books	
Make cars	
Total the shopping bill at a checkout	
Experience religious insights and prayer	
Control the production of soft drinks	

(1 mark)

- (ii) Tick **one** box to show something computers can do better than people.

	Tick one box
Control the operation of traffic lights	
Design new clothes	
Do the ironing	
Decide what colour to paint a room	
Help a friend	

(1 mark)

7

END OF QUESTIONS

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