

Centre Number						Candidate Number				
Surname										
Other Names										
Candidate Signature										



General Certificate of Secondary Education
Foundation Tier
June 2010

Information and Communication Technology (Specification B)(Full Course)

3522/F
F

Written Paper

Monday 21 June 2010 9.00 am to 10.30 am

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

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. Do not write outside the box around each page or on blank pages.
- Do all rough work in this book. Cross through any work you do not want to be marked.

Information

- The marks for questions are shown in brackets.
- The maximum mark for this paper is 120.

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



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

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

- 1 ZoneGem sells watches and jewellery.
A secretary is writing a letter using word processing software. The letter looks like this.

ZoneGem
Universe House
Little Norton
Anderstown
AN12 2ZZ

01288 674765
bn@ZoneGem.com

21/06/2010

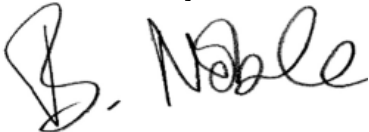
Dear Mr Kowalczyk

Many thanks for your order. We do not have all the items on your order in stock.

You can choose: next day delivery; within 3 working days; or economy.

We have the SWgold watch in stock at a cost of £350.

Yours sincerely



B Noble

} Paragraph A

} Paragraph B

- 1 (a) Tick **three** boxes to show features of word processing software that could be used to improve the letter.

	Tick three boxes
Bar chart	
Bold	
Sound	
Font size	
Wizard	
Spell checker	


(3 marks)



- 1 (b) The secretary wants to align some text.
Write **one** label in each box to name the type of alignment shown.


Label	Type of Alignment
A	Left
B	Centred
C	Right
D	Justified
E	Horizontal

- 1 (b) (i)

	Write one label in the box
	

(1 mark)

- 1 (b) (ii)

	Write one label in the box
	

(1 mark)

- 1 (c) The secretary is going to rearrange the letter so that paragraph A is below paragraph B.
Write the labels in order to show how the secretary could do this.

Label	Operation
A	paste
B	cut
C	position the cursor after paragraph B
D	highlight paragraph A

Label

(2 marks)

Question 1 continues on the next page

Turn over ►



- 1 (d) The secretary is designing a logo for ZoneGem to be used in the letter heading. Write **one** label in each box to name the feature used.

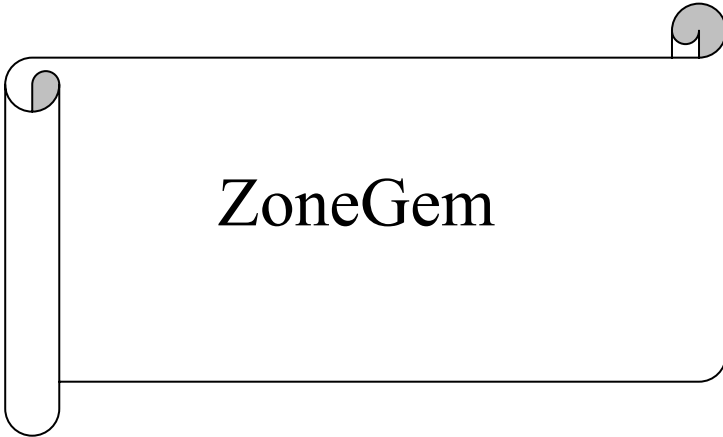
Label	
A	Page layout
B	Wizard
C	Autoshape
D	Template
E	Word art
F	Text box

- 1 (d) (i)

Feature	Write one label in the box
	

(1 mark)

- 1 (d) (ii)

Feature	Write one label in the box
	

(1 mark)



1 (d) (iii)

Feature	Write one label in the box
<div style="border: 1px solid black; width: 150px; height: 50px; margin: 0 auto; display: flex; align-items: center; justify-content: center;"> ZoneGem </div>	

(1 mark)

1 (e) The secretary inserts a picture of the SWgold watch that has been saved on the hard disk. Tick **three** boxes to show different file types the picture could have.

	Tick three boxes
.doc	
.jpg	
.xls	
.bmp	
.html	
.gif	

(3 marks)

1 (f) The secretary sends the letter as an e-mail attachment. Tick **two** boxes to show possible security threats.

	Tick two boxes
Someone might copy the secretary's signature, pretend to be the secretary and attempt to defraud the company	
Someone might use the secretary's credit cards to buy goods on the web	
Someone might steal the secretary's computer	
Someone might use the secretary's signature to obtain a bus pass	
Someone might read the e-mail, then they would know the SWgold watch is in stock and could steal from them	

(2 marks)



- 2 A plumber uses a computer to work out the cost of refurbishing a kitchen for a customer. This is known as a quotation. Part of the information displayed on the monitor is shown below.

	A	B	C	D
1	Materials	Unit Cost	Quantity	
2	Sink	£200.00	1	£200.00
3	Sink taps	£50.00	2	£100.00
4	Washing machine	£350.00	1	£350.00
5	Washing machine taps	£25.00	2	£50.00
6	Wall tiles	£2.00	50	£100.00
7	Floor tiles	£5.00	100	£500.00
8	Total cost of materials			£1300.00
9	Labour costs			£500.00
10	Total cost of materials and labour			£1800.00
11	VAT			£270.00
12	Total cost to customer			£2070.00

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

	Tick one box
presentation	
e-mail	
graphics	
spreadsheet	
web browser	

(1 mark)

- 2 (b) Write **one** label in each box to show a cell with the feature described.

Label	Cell
A	A6
B	D8
C	C5
D	D5
E	A0

- 2 (b) (i)

Feature	Write one label in the box
Cell content is text	

(1 mark)



2 (b) (ii)

Feature	Write one label in the box
Cell content is number	

(1 mark)

2 (b) (iii)

Feature	Write one label in the box
Cell format is currency	

(1 mark)

2 (b) (iv)

Feature	Write one label in the box
Cell content is the formula =B5*C5	

(1 mark)

2 (b) (v)

Feature	Write one label in the box
Cell content is the formula =SUM(D2:D7)	

(1 mark)

2 (c) (i) Tick **two** boxes to show the advantages to the plumber in using the software.

	Tick two boxes
The quotation can be edited to produce a similar quotation for another customer	
The plumber must have access to a computer to produce a quotation	
The plumber can rely on the software to produce accurate calculations	
The plumber must be able to use the software	
The plumber wants to attend college to get more qualifications	

(2 marks)

2 (c) (ii) Tick **two** boxes to show the disadvantages to the plumber in using the software.

	Tick two boxes
The quotation can be edited to produce a similar quotation for another customer	
The plumber must have access to a computer to produce a quotation	
The plumber can rely on the software to produce accurate calculations	
The plumber must be able to use the software	
The plumber wants to attend college to get more qualifications	

(2 marks)

Question 2 continues on the next page

Turn over ►



- 2 (d) The plumber's employer provides a laptop computer and portable printer. The plumber uses the laptop computer to play online games on the Internet during working hours.

Tick **two** boxes to show why the plumber should not do this.

	Tick two boxes
The laptop computer has a firewall and antivirus software	
The plumber has received an e-mail from an Internet bank	
The plumber should be working not playing online games on the Internet	
The laptop computer does not have database software	
The plumber's employer has told the plumber that the laptop computer should only be used to help with the plumber's job	

(2 marks)

- 2 (e) The laptop computer has been infected by malicious software downloaded from the Internet.

Tick **three** boxes to show what could be done to help protect the laptop computer.

	Tick three boxes
Encrypt e-mails	
Use antivirus software	
Use a firewall	
Use a burglar alarm	
Only allow access to trusted websites	
Employ a supervisor to make sure the plumber uses the laptop computer only to help with the plumber's job	

(3 marks)



- 3 A doctor looks at information about patients on a computer.
This is part of the information displayed on the monitor.

	Patient Number	Surname	Gender	Admission Date	Doctor
	0453	Jackson	M	10/01/2010	Parkinson
	0371	Bolton	F	15/03/2010	Parkinson
	0882	Walton	R	20/03/2010	James
	0061	Singh	M	03/04/2010	Aziz
	0263	Janiak	F	07/04/2010	Parkinson
▶					

- 3 (a) Tick **one** box to show the type of software the doctor would use.

	Tick one box
presentation	
database	
graphics	
e-mail	
library	

(1 mark)

- 3 (b) State **one** other field that should be included in a patient's record and give **one** reason why the doctor would find the field useful.

Field that should be included:

.....

Reason why the doctor would find the field useful:

.....

.....

(2 marks)

- 3 (c) A **Gender** has been input incorrectly.
Tick **one** box to show a validation check that would detect this error.

	Tick one box
Range check	
Check digit	
Type check for alphanumeric data	
Type check for numeric data	
Table look-up	

(1 mark)

Question 3 continues on the next page

Turn over ▶



	Patient Number	Surname	Gender	Admission Date	Doctor
	0453	Jackson	M	10/01/2010	Parkinson
	0371	Bolton	F	15/03/2010	Parkinson
	0882	Walton	R	20/03/2010	James
	0061	Singh	M	03/04/2010	Aziz
	0263	Janiak	F	07/04/2010	Parkinson
▶					

- 3 (d) 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 left blank	
A key field must have the same value in every column	
Names make better key fields than numbers in a large database	
A key field must be different in every record	
Patients have a right to know their patient number	

(2 marks)

- 3 (e) Write **one** label in each box to complete the sentences to show why the **Gender** field has been coded.

Label	
A	input
B	control
C	answer
D	storage
E	feedback

- 3 (e) (i) Coded information can be faster to . (1 mark)

- 3 (e) (ii) Coded information takes up less space on the hard disk. (1 mark)

- 3 (f) The information displayed on the monitor has already been sorted.
Tick **one** box to show the field the information has been sorted on.

	Tick one box
Patient Number	
Surname	
Gender	
Admission Date	
Doctor	

(1 mark)



3 (g) Write down the patient numbers in the order they would appear after the records have been sorted into descending order on the **Patient Number** field.

Patient Number

(2 marks)

3 (h) The doctor is searching for patients' information.

3 (h) (i) Write down the **Surname(s)** in the record(s) selected using this search condition.

Search Condition: **Surname** contains 'Jac'
Surname(s) in the record(s) selected:

.....
(1 mark)

3 (h) (ii) Write down the **Surname(s)** in the record(s) selected using this search condition.

Search Condition: **Admission Date** is greater than 01/04/10
Surname(s) in the record(s) selected:

.....
(1 mark)

3 (h) (iii) Write down the **Surname(s)** in the record(s) selected using this search condition.

Search Condition: **Gender** is F AND **Doctor** is Parkinson
Surname(s) in the record(s) selected:

.....
(1 mark)

3 (h) (iv) Write down the **Surname(s)** in the record(s) selected using this search condition.

Search Condition: **Admission Date** is 10/01/2010 OR **Patient Number** is 0061
Surname(s) in the record(s) selected:

.....
(1 mark)



4 E-mail is used at work and at home.

4 (a) Tick **two** boxes to show which of the following could be valid e-mail addresses.

	Tick two boxes
yusuf%20%.sch.nt	
johnp@electro.sch.uk	
customerservices*shopping.com	
paul@collins@man.ac.uk	
admin@hickleyhealth.co.uk	

(2 marks)

4 (b) Tick **two** boxes to show what can be attached to an e-mail.

	Tick two boxes
A spreadsheet	
A hard disk	
A .jpg file	
A star network	
A window	

(2 marks)

4 (c) When you receive an e-mail on a computer, you can reply to it, forward it or delete it. Tick **two** boxes to show which of these statements are true.

	Tick two boxes
When you reply to an e-mail, the e-mail is automatically addressed to the person who sent it to you	
When you forward an e-mail, you have to enter the e-mail address of the person you are sending it to	
When you forward an e-mail, all attachments are removed	
When you have sent an e-mail, you can never look at it again	
You can receive e-mail that is not addressed to you	

(2 marks)

4 (d) Files attached to e-mails can be zipped.

4 (d) (i) Tick **one** box to show a feature of a zipped file.

	Tick one box
A zipped file cannot be saved on a hard disk	
A zipped file is always very small	
A zipped file is always very big	
A zipped file is more secure	
A zipped file is compressed	

(1 mark)



4 (d) (ii) Write **one** label in each box to complete the sentence.

Label	
A	upload
B	edit
C	rename
D	enter
E	download

A zipped file will and faster. (2 marks)

4 (e) A householder is buying the weekly shopping online and discovers a new website for shopping.
The home page is attractively designed with pictures of goods for sale on it.
The householder wants to persuade a friend to use this website. The householder could e-mail the home page to the friend or could send an e-mail with a link to the home page in it.

4 (e) (i) Tick **one** box to show an advantage to the householder in e-mailing the home page.

	Tick one box
When opened, the e-mail shows immediately that the home page is attractive	
The e-mail is automatically virus checked when downloaded	
The e-mail is smaller and will upload and download faster	
The e-mail link is in an attractive font and colour	
The e-mail is larger and will upload and download more slowly	

(1 mark)

4 (e) (ii) Tick **one** box to show an advantage to the householder in sending an e-mail with a link to the home page in it.

	Tick one box
When opened, the e-mail shows immediately that the home page is attractive	
The e-mail is automatically virus checked when downloaded	
The e-mail is smaller and will upload and download faster	
The e-mail link is in an attractive font and colour	
The e-mail is larger and will upload and download more slowly	

(1 mark)

Question 4 continues on the next page

Turn over ►



- 4 (f) The householder is having difficulty with the new website and needs to contact the owners.

This hyperlink is on the home page: [Contact us by e-mail](#)

Tick **two** boxes to show what should happen when the householder clicks on the hyperlink.

	Tick two boxes
You have to enter the e-mail address of the person you are sending it to	
A search engine is displayed	
The e-mail is automatically addressed to the owners	
You have to fax the help line	
A new e-mail message opens or a blank e-mail form opens	

(2 marks)

- 4 (g) Tick **two** boxes to show advantages of shopping online compared with going to the shops.

	Tick two boxes
You can compare a wider range of goods more easily	
You have a better idea of the quality of the goods you are buying	
You can pay by credit card	
You have to wait for the goods to be delivered	
You have access to the whole product range	

(2 marks)



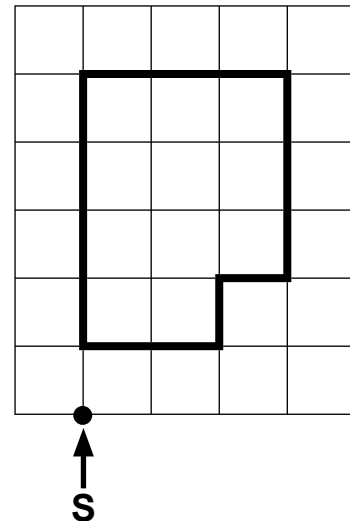
5 A worker is using a computer controlled cutter to cut a shape out of a sheet of rigid plastic.

These are examples of instructions that control the cutter.

Instruction	What the cutter does
Up	The cutter stops cutting and is raised above the plastic sheet
Down	The cutter moves into the cutting position on the plastic sheet
Move 5	Move forward 5 units. In the down position the plastic sheet will be cut but in the up position the cutter moves over the sheet without cutting it
Left	Turn left 90 degrees
Right	Turn right 90 degrees
To start	Returns the cutter to the starting position

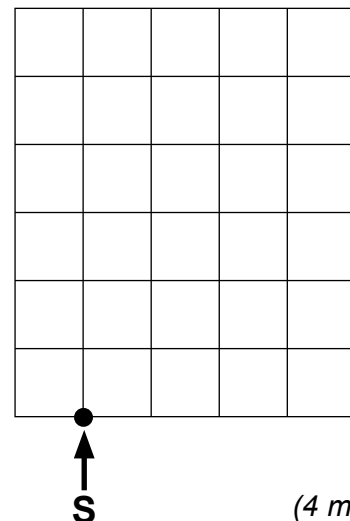
5 (a) These instructions cut out the shape below. The cutter starts at S and is returned to S.

- Up
- Move 1
- Down
- Move 4
- Right
- Move 3
- Right
- Move 3
- Right
- Move 1
- Left
- Move 1
- Right
- Move 2
- Up
- To start



Draw on the grid the shape cut out by the instructions below. You should start at S and return to S.

- Up
- Move 2
- Down
- Move 2
- Right
- Move 3
- Right
- Move 2
- Right
- Move 3
- Up
- To start



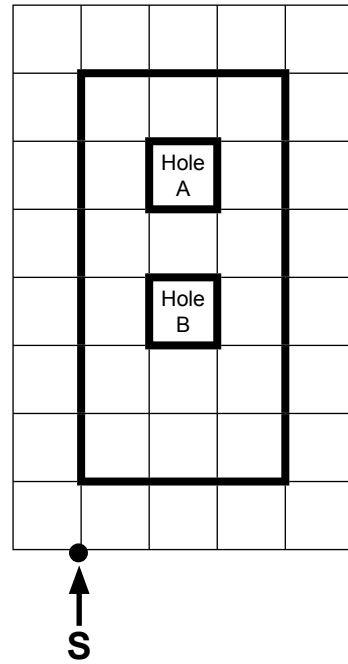
(4 marks)

Turn over ▶



5 (b) These instructions remove hole A. The cutter starts at S and is returned to S.

Up
Move 5
Right
Move 1
Down
Move 1
Left
Move 1
Left
Move 1
Left
Move 1
Up
To start



Write the instructions to remove hole B. The cutter starts at S and is returned to S.

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.....

(4 marks)



5 (c) Write the instructions to cut out the shape below. The cutter starts at S and is returned to S.

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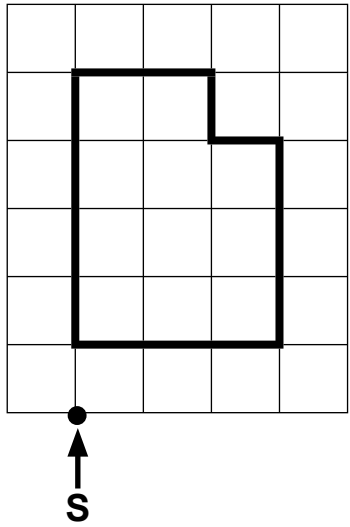
.....

.....

.....

.....

.....



(4 marks)

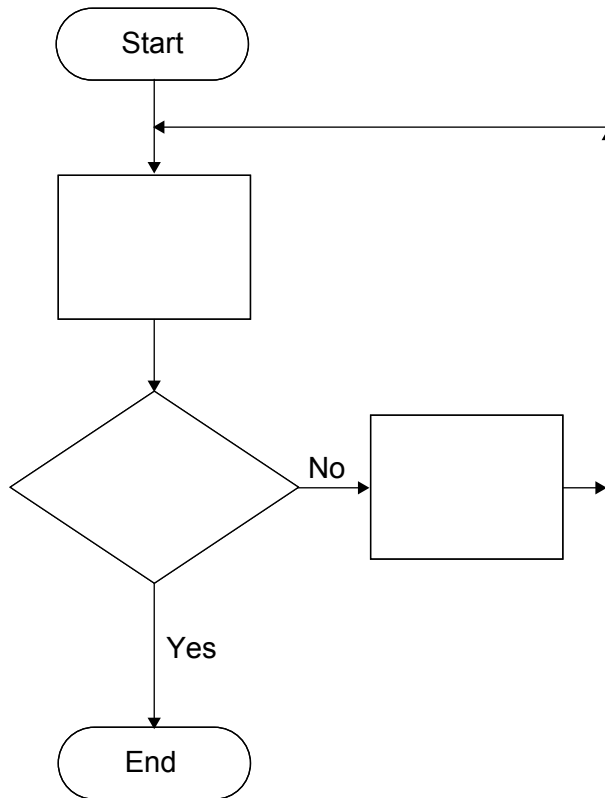
Question 5 continues on the next page

Turn over ▶



- 5 (d) The worker writes some instructions to cut out a shape but they do not cut out the shape wanted.
Write the labels of these statements in the flowchart boxes to show a method of developing and testing the instructions.

Label	Statement
A	Is the shape wanted cut out?
B	Change the instructions
C	Run the instructions

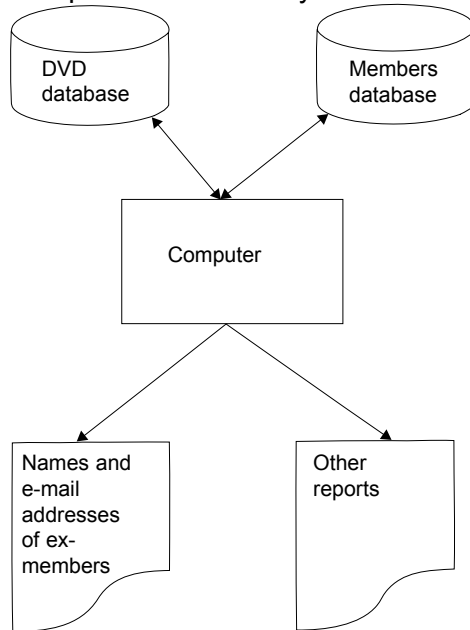


(3 marks)

15



6 SilverDVD is a company that rents out DVDs to its members. SilverDVD use an ICT system to keep track of DVDs rented to members. This is a diagram of part of their ICT system.



6 (a) SilverDVD produce a report showing the names and e-mail addresses of ex-members so that they can contact them.

6 (a) (i) Some ex-members do not have e-mail. Write **one** label in the box to complete the sentence.

Label	
A	envelopes
B	web mail
C	mail merge
D	presentation software
E	a laptop

If ex-members do not have e-mail, SilverDVD send personalised letters which are produced using . (1 mark)

6 (a) (ii) Tick **three** boxes to show other reports that the ICT system could be expected to produce.

	Tick three boxes
A list showing the bank balance of each member	<input type="checkbox"/>
A list of current members	<input type="checkbox"/>
A list showing which car each member drives	<input type="checkbox"/>
A list of competitors' sales the previous week	<input type="checkbox"/>
A list of DVDs that are available to rent	<input type="checkbox"/>
A list of DVDs that each member has borrowed	<input type="checkbox"/>

(3 marks)

Turn over ▶



- 6 (b) SilverDVD's employees have user documentation to help them use the ICT system. Employees complain that some of the user documentation is not very good. This is part of the documentation they complain about.

Reports are produced using the report writer feature which is usually in the report menu. If you don't see the report wizard in the report menu may not be installed click select install click on OK and report and click on OK. Data from archived database files can be included by selecting. Before including fields make sure the field's match in the source archive file with the report.

- 6 (b) (i) Tick **three** boxes to show why this is not good user documentation.

	Tick three boxes
The layout does not help employees make sense of the documentation	<input type="checkbox"/>
The documentation is in two columns	<input type="checkbox"/>
The text is too large to read comfortably	<input type="checkbox"/>
There are spelling mistakes and grammatical errors	<input type="checkbox"/>
The documentation has a frame round it	<input type="checkbox"/>
The font is Arial	<input type="checkbox"/>

(3 marks)

- 6 (b) (ii) Give **one** other reason why this is not good user documentation.

.....

.....

(1 mark)



6 (c) User documentation can be made available as a printed manual.

Tick **three** boxes to show other ways documentation can be made available.

	Tick three boxes
As help in the software	
As a .mp3 file saved on a USB memory stick	
On a keyboard	
On a webcam	
On a website	
As a .pdf file saved on a USB memory stick	

(3 marks)

6 (d) SilverDVD are going to introduce a new ICT system.

Write **one** label in each box to show at which stage of the ICT systems life cycle each task is carried out.

Label	
A	Specification
B	Design
C	Implementation
D	Testing
E	Documentation

6 (d) (i) Task: Purchase the hardware and software to be used

(1 mark)

6 (d) (ii) Task: Check that the ICT system works

(1 mark)

6 (d) (iii) Task: Produce a flowchart of the new ICT system

(1 mark)

6 (d) (iv) Task: State exactly what the new ICT system will do when it has been produced

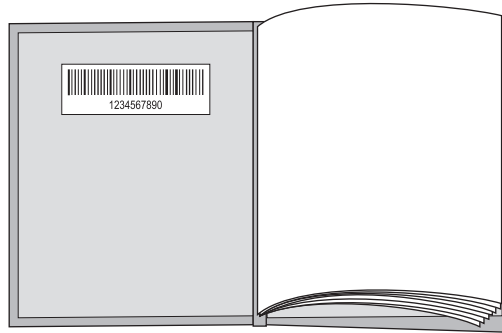
(1 mark)

15

Turn over ▶



- 7 A school library uses an ICT system to keep track of books. The librarian puts a bar code in each book.



- 7 (a) Write **one** label in each box to complete the sentences.

Label	
A	pupil
B	bar code reader
C	book
D	word processor
E	keyboard

- 7 (a) (i) Bar codes can be input faster and more accurately using a . (1 mark)

- 7 (a) (ii) The librarian can enter the number printed under the bar code using a . (1 mark)

- 7 (a) (iii) The bar code identifies the . (1 mark)

- 7 (b) Tick **two** boxes to show why the number is printed under the bar code.

	Tick two boxes
If the bar code cannot be read by the ICT system the librarian enters the number	<input type="checkbox"/>
The ICT system reads the number not the bar code	<input type="checkbox"/>
Most people cannot read bar codes	<input type="checkbox"/>
Most people do not read library books	<input type="checkbox"/>
The number has coded information which is not in the bar code	<input type="checkbox"/>

(2 marks)



- 7 (c) (i) The condition of a library book is described on the ICT system using a code. This is the code used:

Code	Condition
N	New
G	Good
W	Worn
U	Unusable

Tick **two** boxes to describe this code.

	Tick two boxes
The code is information	
The code is data	
The code is qualitative	
The code is quantitative	
The code is too short	

(2 marks)

- 7 (c) (ii) A pupil returns a book. The librarian complains that the book is worn but the ICT system shows it was in good condition when the pupil borrowed it. The pupil says it was worn when it was borrowed.

Tick **two** boxes to show the most likely ways this difference of opinion could happen.

	Tick two boxes
The code on the ICT system has not been updated recently	
A hacker has changed the code on the ICT system	
The librarian has changed the code on the ICT system	
Whether the condition of the book is judged as worn or good can vary from one person to another	
The book is overdue	

(2 marks)

Question 7 continues on the next page

Turn over ▶



- 7 (d) Using the school library ICT system can be difficult and documentation is provided to help users.

Write **one** label in each box to complete the sentences.

Label	
A	parents
B	the ICT technician
C	the school secretary
D	Ofsted
E	the librarian
F	pupils

- 7 (d) (i) Technical documentation could be useful to . (1 mark)

- 7 (d) (ii) User documentation could be helpful to and . (2 marks)

- 7 (e) Tick **three** boxes to show reasons to justify the use of an ICT system in the library.

	Tick three boxes
There are 50 books in the school library	<input type="checkbox"/>
The school library has over 50,000 books	<input type="checkbox"/>
Pupils only have access to the school library in Citizenship lessons	<input type="checkbox"/>
There are 20 pupils at the school	<input type="checkbox"/>
There are 2,000 pupils attending the school	<input type="checkbox"/>
Pupils use the library to look for information to help with their homework	<input type="checkbox"/>

(3 marks)



8 People often use ICT at home and when they relax or do leisure activities.

8 (a) TV broadcasting is changing from analogue to digital. There are many sources of TV programmes. For example, programmes can be broadcast over the Internet.

8 (a) (i) Tick **two** boxes to show the advantages when TV programmes are broadcast over the Internet.

	Tick two boxes
You can watch programmes after they have been on TV	
The picture can freeze when you do not want it to	
The sound and the picture may separate	
If you want to watch programmes later, you don't have to record them yourself	
You can watch programmes before they have been on TV	

(2 marks)

8 (a) (ii) Tick **two** boxes to show the disadvantages when TV programmes are broadcast over the Internet.

	Tick two boxes
If your Internet Service Provider (ISP) has a download limit, you are more likely to exceed it	
You can watch programmes on your computer	
You have to slow down the Internet so that TV programmes can be shown	
There is too much choice	
If the Internet is too slow, the picture could be jerky	

(2 marks)

8 (a) (iii) Tick **two** boxes to show other sources of TV programmes.

	Tick two boxes
Recorded on a floppy disk	
Recorded on a DVD or VHS tape	
Recorded on a scanner	
Recorded on a Hard Disk	
Recorded on a CD	

(2 marks)

Question 8 continues on the next page

Turn over ▶



8 (b) A wireless home network includes three laptops and a desktop computer, and these can all use the Internet at the same time.

8 (b) (i) Tick **two** boxes to show the hardware needed so users can access the Internet over the home network.

	Tick two boxes
Printer	
Modem	
Webcam	
Router	
Digital camera	

(2 marks)

8 (b) (ii) Draw a labelled diagram of the wireless home network. You should include three laptops, a desktop computer and the other essential hardware needed so that users can access the Internet.

(4 marks)



8 (c) Discuss other ways in which the use of ICT extends what people can do at home, when they relax or do leisure activities.

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(3 marks)

15

END OF QUESTIONS



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