

Surname		Other Names	
Centre Number		Candidate Number	
Candidate Signature			

For Examiner's Use
--------------------

General Certificate of Secondary Education  
June 2009



**INFORMATION AND COMMUNICATION TECHNOLOGY 3522/F  
(SPECIFICATION B) (FULL COURSE)  
Written Paper  
Foundation Tier**

**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>
---

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			

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 120.
- The marks for questions are shown in brackets.
- You are reminded of the need for good English and clear presentation in your answers.



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

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

1 The Ship Restaurant has this old menu.

<p>The Ship Restaurant</p> <p>Freshly made food</p> <p>Starters</p> <p>Prawn Cocktail £4.95</p> <p>House Pate £4.50</p> <p>Garlic Mushrooms £4.50</p> <p>Main Courses</p> <p>Rack of Lamb £11.95</p> <p>Steak au Poivre £10.95</p> <p>Sea Food Thermidor £10.95</p> <p>Vegetable Bake £6.85</p> <p>Sweets</p> <p>Sticky Toffee Pudding £4.50</p> <p>Pavlova £5.50</p> <p>Banana Split £4.50</p> <p>Early Bird Menu 5pm to 6pm</p> <p>Book on 0997 2341293</p>
---

The restaurant manager changes the old menu to produce this new menu.

**The Ship Restaurant**

Freshly made food

**Starters**

Prawn Cocktail £4.95

House Pate £4.50

Garlic Mushrooms £4.50

**Main Courses**

Rack of Lamb £11.95

Steak au Poivre £10.95

Sea Food Thermidor £10.95

Vegetable Bake £6.85

**Sweets**

Sticky Toffee Pudding £4.50

Pavlova £5.50

Banana Split £4.50

Early Bird Menu 5pm to 6pm

Book on 0997 2341293



- 1 (a) Tick **three** boxes to show how the line of text labelled **C** has been changed.

	Tick <b>three</b> boxes
The text has been bulleted	
The style of text has been changed to bold	
The font has been changed	
The text has been resized	
The text has been right justified	
The font has been animated	

(3 marks)

- 1 (b) Complete the sentences using words from this list.

a camera  
a photograph  
a wizard  
an autoshape  
clip art  
word art

- 1 (b) (i) Label **A** points to ..... (1 mark)

- 1 (b) (ii) Label **B** points to ..... and text box which have  
been grouped. (1 mark)

- 1 (b) (iii) Label **D** points to ..... (1 mark)

- 1 (c) The manager applied design principles when the menu was changed.  
Tick **three** boxes to show good design principles.

	Tick <b>three</b> boxes
Use a spreadsheet	
Include sound and video where possible	
Avoid too much fussiness caused by overuse of the software features	
Use obscure or unfamiliar words without explanation	
Make use of the features of the software to make the menu more interesting	
The font should be easy to read	

(3 marks)

**Question 1 continues on the next page**

**Turn over ▶**



1 (d) The manager saves the new menu as a file on backing storage.

1 (d) (i) Tick **three** boxes to show backing storage to save the file on.

	Tick <b>three</b> boxes
Hard disk	
Modem	
Flash memory stick	
DVD-ROM	
DVD-RW	
Network	

(3 marks)

1 (d) (ii) Tick **one** box to show the most likely file type.

	Tick <b>one</b> box
.doc	
.ppt	
.xls	
.html	
.xyz	

(1 mark)

1 (d) (iii) The old menu is also saved on backing storage.  
Tick **two** boxes to show which of these statements are most likely to be true.

	Tick <b>two</b> boxes
The new menu has a larger file size than the old menu	
The new menu and the old menu have exactly the same file size	
The new menu loads more slowly than the old menu	
The old menu has been scanned	
The old menu loads more slowly than the new menu	

(2 marks)

**Turn over for the next question**



**Turn over for the next question**

**DO NOT WRITE ON THIS PAGE  
ANSWER IN THE SPACES PROVIDED**

**Turn over ▶**



- 2 A decorator uses a computer to calculate the cost of redecorating a kitchen for a client. This information is displayed on the monitor screen.

	A	B	C	D
1	<b>Estimated costs for redecorating the kitchen</b>			
2				
3	<b>Item to be purchased</b>	<b>Unit cost</b>	<b>Quantity needed</b>	<b>Total cost for each item</b>
4	Can of emulsion paint	£ 25.00	2	£ 50.00
5	Can of gloss paint	£ 10.00	3	£ 30.00
6	Paint brush	£ 5.50	4	£ 22.00
7	Laminate flooring (per square metre)	£ 15.50	10	£155.00
8	Cooker	£500.00	1	£500.00
9				
10	<b>Total cost for the kitchen</b>			<b>£757.00</b>

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

	Tick <b>one</b> box
word processor	
spreadsheet	
desk top publishing	
virus scanner	
web browser	

(1 mark)

- 2 (b) Row 4 of the spreadsheet shows that 2 cans of emulsion paint are needed at a cost of £25 each.

Tick **two** boxes to show which of these statements are true.

	Tick <b>two</b> boxes
4 cans of gloss paint are needed at a cost of £10.00 each	
10 square metres of laminate flooring are needed at a cost of £20 each	
4 paint brushes are needed at a cost of £5.50 each	
3 cans of gloss paint are needed at a cost of £10.00 each	
The total cost for redecorating the kitchen is £1000	

(2 marks)

- 2 (c) Each cell could contain text, a number or a formula.

- 2 (c) (i) Cell A6 contains text. Write in the box the cell reference of another cell that contains text.

(1 mark)

- 2 (c) (ii) Write in the box the cell reference of a cell that contains a number.

(1 mark)



- 2 (d) Some cells contain a formula.

Label	Formula
A	=SUM(D4:D8)
B	=B6*C6
C	=C6*D6
D	=SUM(D4:D10)
E	=SUM(B6:C6)

- 2 (d) (i) Write in the box the label of the formula in cell D6.

(1 mark)

- 2 (d) (ii) Write in the box the label of the formula in cell D10.

(1 mark)

- 2 (e) Tick **three** boxes to show the advantages to the decorator in using the software rather than working out the cost by hand.

	Tick <b>three</b> boxes
Costs cannot be changed	
The decorator can avoid paying tax	
It is faster to write an estimate on a scrap of paper	
The decorator can rely on the software to do accurate calculations if it has been set up correctly	
The software can be reused for other clients saving the decorator time and effort	
The client can be given a neatly printed estimate	

(3 marks)

- 2 (f) The decorator wants a computer that can be taken to a client's house so that estimates can be done on the spot and a printed copy given to the client.

Tick **two** boxes to show what types of computer could be used.

	Tick <b>two</b> boxes
Tablet	
Laptop	
Desktop	
Mainframe	
File server	

(2 marks)

Question 2 continues on the next page

Turn over ►



- 2 (g) The decorator's computer system could have these features.

Label	
A	touch screen
B	router
C	touch pad
D	scanner

Label	
E	speakers
F	modem
G	printer
H	flash memory stick

- 2 (g) (i) Write **one** label in each box to show **two** input devices that would be suitable.

Input device 1

Input device 2

(2 marks)

- 2 (g) (ii) Write **one** label in the box to show **one** output device that would be suitable.

(1 mark)





- 3 A health centre uses a database to store patients' information. Patients fill in a form when they register with the health centre and a receptionist types in the data.

This is a part of the database.

Patient Number	Name	Date of Birth	Gender	Doctor
01938	Baty	13/13/1972	M	McHenry
49073	Attwood	13/11/2000	F	Tysome
28985	Phillips	02/12/1995	M	McHenry
30234	Wolf	09/07/1982	M	Lynch
30234	Nibert	09/07/1982	F	Tysome
10056	Jones	14/07/1947	F	Tysome

- 3 (a) Write in the box the number of records shown.

(1 mark)

- 3 (b) Write in the box the number of fields shown.

(1 mark)

- 3 (c) The receptionist entered the data for Wolf then the data for Nibert. The receptionist made a mistake when entering the **Patient Number** for Nibert. The **Patient Number** is a key field.

- 3 (c) (i) Give **one** reason why the **Patient Number** for Nibert must be incorrect.

.....  
.....

(1 mark)

- 3 (c) (ii) Tick **two** boxes to show how this error could be avoided.

	Tick <b>two</b> boxes
The medical secretary should enter the <b>Patient Numbers</b>	
The database should generate the <b>Patient Numbers</b>	
The doctor should enter the <b>Patient Numbers</b>	
<b>Patient Numbers</b> should be left off the database as they are not needed	
The database should automatically check that the <b>Patient Numbers</b> are correct	

(2 marks)

Question 3 continues on the next page

Turn over ►



Patient Number	Name	Date of Birth	Gender	Doctor
01938	Baty	13/13/1972	M	McHenry
49073	Attwood	13/11/2000	F	Tysome
28985	Phillips	02/12/1995	M	McHenry
30234	Wolf	09/07/1982	M	Lynch
30234	Nibert	09/07/1982	F	Tysome
10056	Jones	14/07/1947	F	Tysome

- 3 (d) Nibert and Wolf have the same **Date of Birth** on the database. Explain why this could be correct.

.....  
 .....

(1 mark)

- 3 (e) (i) Tick **one** box to show the name of the field that has been coded.

	Tick <b>one</b> box
<b>Patient Number</b>	
<b>Name</b>	
<b>Date of Birth</b>	
<b>Gender</b>	
<b>Doctor</b>	

(1 mark)

- 3 (e) (ii) Tick **two** boxes to show why codes are used.

	Tick <b>two</b> boxes
It is faster to enter the data	
It is more secure	
There are fewer mistakes in the grammar	
People have short attention spans	
Less space is needed to store the data on backing storage	

(2 marks)

- 3 (e) (iii) Tick **two** boxes to show the features of a useful code.

	Tick <b>two</b> boxes
The code is encrypted	
The code can be communicated over a wireless network	
The code is easy to understand and easy to remember	
The length of the code is much shorter than the original data	
The code can be set to music	

(2 marks)



3 (f) The **Date of Birth** has been entered incorrectly for one patient.

3 (f) (i) Tick **one** box to show which patient has the incorrect **Date of Birth**.

	Tick <b>one</b> box
Baty	
Attwood	
Phillips	
Wolf	
Nibert	

(1 mark)

3 (f) (ii) Explain how you know this patient has an incorrect **Date of Birth**.

.....

.....

(1 mark)

3 (f) (iii) Describe a validation check that would help prevent this error.

.....

.....

.....

.....

(2 marks)

15
----

**Turn over for the next question**

**Turn over ▶**





- 4 (a) (iii) When the web page is displayed by a browser, the title 'Hazel Cottage' appears in the title bar at the top of the window.  
Edit **Line 2** to change the title to 'Willow Cottage'.

<b>HTML to be edited</b>	<title>Hazel Cottage</title>
<b>Edited HTML</b>	

(2 marks)

- 4 (a) (iv) A picture of Willow Cottage is saved as willowcottage.jpg.  
Write down the number of the line which should be edited so that the picture of Willow Cottage will be displayed.  
Edit the line so that the picture of Willow Cottage will be displayed.

<b>Number of line to be edited</b>	
<b>Edited HTML</b>	

(3 marks)

- 4 (b) (i) When the editing is finished the file needs to be saved. The programmer uses the Save command.  
Tick **one** box to show why this is a mistake.

	Tick <b>one</b> box
The web page for Willow Cottage would be saved as willowcottage.htm	
The web page for Willow Cottage would be saved as hazelcottage.htm	
The web page for Hazel Cottage would be saved as willowcottage.htm	
The web page for Hazel Cottage would be saved as hazelcottage.bak	
The web page for Willow Cottage would be saved as willowcottage.bak	

(1 mark)

- 4 (b) (ii) Tick **one** box to show what command the programmer should have used instead of Save.

	Tick <b>one</b> box
Copy	
Rename	
Delete	
Paste	
Save As	

(1 mark)

**Question 4 continues on the next page**

**Turn over ►**



- 4 (c) The holiday accommodation website has a search engine designed specifically to search it.  
One of the inputs is:

**Select accommodation type**

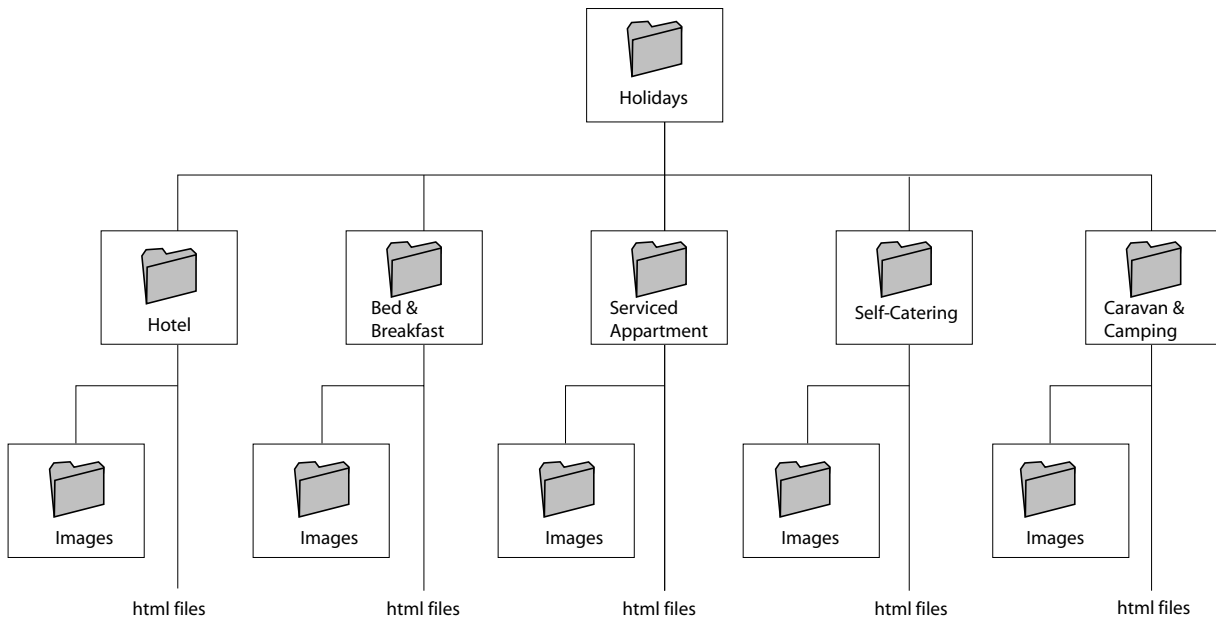
<input type="checkbox"/> All	<input type="checkbox"/> Serviced Apartment
<input type="checkbox"/> Hotel	<input type="checkbox"/> Self-Catering
<input type="checkbox"/> Bed & Breakfast	<input type="checkbox"/> Caravan & Camping

Tick **three** boxes to show other inputs that might be used to search the website.

	Tick <b>three</b> boxes
Distance from work	
The weather	
Number of people	
If pets are welcome	
Date of holiday	
Nearest garage	

(3 marks)

- 4 (d) All the web pages for all the holiday accommodation will be saved together in a folder called Holidays. The folders used are shown below.



- 4 (d) (i) Tick **one** box to show the most likely path to the file willowcottage.htm.

	Tick <b>one</b> box
C:\Holidays\Bed & Breakfast\willowcottage.htm	
C:\Holidays\Self-Catering\willowcottage.htm	
C:\Holidays\Bed & Breakfast\Images\willowcottage.htm	
C:\Holidays\Hotel\willowcottage.htm	
C:\Holidays\Self-Catering\Images\willowcottage.htm	

(1 mark)

- 4 (d) (ii) Tick **one** box to show the most likely path to the file willowcottage.jpg.

	Tick <b>one</b> box
C:\Holidays\Bed & Breakfast\willowcottage.jpg	
C:\Holidays\Self-Catering\willowcottage.jpg	
C:\Holidays\Bed & Breakfast\Images\willowcottage.jpg	
C:\Holidays\Hotel\willowcottage.jpg	
C:\Holidays\Self-Catering\Images\willowcottage.jpg	

(1 mark)

15
----

**Turn over for the next question**

**Turn over ▶**



5 When students log on to a computer network they have to enter a username and password.

5 (a) Tick **three** boxes to show sensible rules about using passwords.

	Tick <b>three</b> boxes
You should write your password on a piece of paper and stick it on the computer	
You should not watch someone entering their password	
You should tell your friends your password in case you forget it	
You should change your password frequently	
You should use the name of your pet as a password	
You should keep your password secret	

(3 marks)

5 (b) Tick **three** boxes to show which of these statements are true.

	Tick <b>three</b> boxes
You cannot have the same username as someone else	
You can have the same password as someone else	
You can change your own password	
You can change other students' passwords	
You can change teachers' passwords	
You can find a list of everyone's usernames and passwords on the Web	

(3 marks)

5 (c) Write **one** label in each box to complete the sentences to describe what happens when you change your password. You may use a label more than once.

Label	
A	current
B	friend's
C	interactive
D	historical
E	new

5 (c) (i) First you enter your  password. (1 mark)

5 (c) (ii) Next you enter your  password. (1 mark)

5 (c) (iii) Finally, you enter your  password again. (1 mark)





5 (d) In parts (d)(i) to (d)(iv), each reason you give should be different.

A student logs on to the network.

5 (d) (i) The network has been set up to prevent students downloading music.  
Give **one** reason why the network has been set up to prevent this.

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

5 (d) (ii) The network has been set up to prevent students downloading and installing software.  
Give **one** different reason why the network has been set up to prevent this.

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

5 (d) (iii) The network prevents students accessing each others' user areas and files.  
Give **one** different reason why the network has been set up to prevent this.

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

5 (d) (iv) The network prevents students accessing some websites.  
Give **one** different reason why the network has been set up to prevent this.

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

5 (e) Sometimes students using the network find that it is very slow.  
Give **one** reason why network access might be slow and suggest a solution.

Reason .....

.....

Solution .....

.....  
*(2 marks)*



6 ParkSafely is a company that manages car parks. It is considering whether to use an ICT system to help manage the car parks.

6 (a) Tick **three** boxes to show reasons why ParkSafely would use an ICT system.

	Tick <b>three</b> boxes
The cost of running an ICT system is cheaper than using the current manual system	
Information on the availability of parking spaces can be displayed automatically	
ParkSafely can charge more	
ParkSafely also own car washes	
All the car parks ParkSafely own are run in very similar ways	
ParkSafely have resurfaced all their car parks	

(3 marks)

6 (b) ParkSafely do a feasibility study to find out if they should use an ICT system. Tick **three** boxes to show what should be done as part of a feasibility study.

	Tick <b>three</b> boxes
Purchase all the new hardware that would be needed	
Train car park workers to use the ICT system	
Test the software that will be used	
Interview car park workers to find out if there are any problems with the current way in which the car parks are managed	
Estimate the cost of new software and hardware	
Briefly describe what the proposed ICT system could be used for	

(3 marks)



- 6 (c) ParkSafely install an ICT system that keeps track of the number of cars in a car park using barriers across the entrances and exits. The barriers are controlled by the ICT system.

Write down the labels in order to show what the ICT system should do when a car approaches the barrier and enters the car park.

Label	Statement
A	Add 1 to the number of cars in the car park
B	If the car park is full, switch the full sign on
C	Issue a ticket
D	Detect the car
E	Open the barrier, wait for the car to pass through and close the barrier

Label

(2 marks)

**Question 6 continues on the next page**

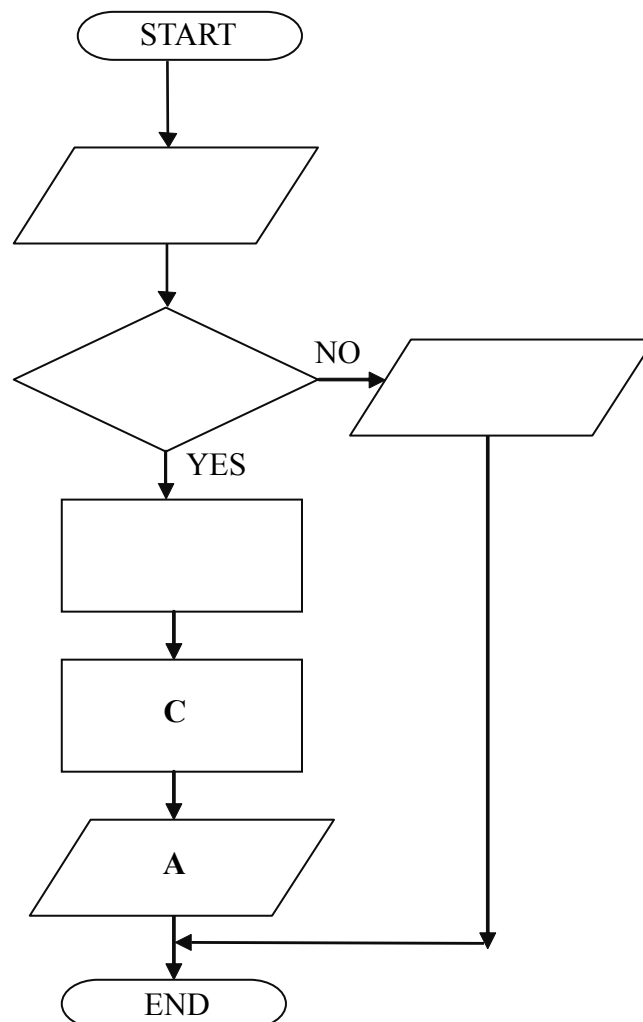
**Turn over ▶**



- 6 (d) Drivers are given a ticket when they park their car. Drivers pay at a pay station just before they return to their car.

Write a label in each box of the flowchart to show what the ICT system should do when a car leaves the car park. Some of them have been done for you.

Label	Statement
A	Switch off the car park full sign
B	Open the barrier, wait for the car to pass through and close the barrier
C	Subtract 1 from the number of cars in the car park
D	Display the message: "Please pay at the pay station" and return the ticket to the driver
E	Read the ticket
F	Has the amount due been paid?



(3 marks)



- 6 (e) Write a label next to each ICT system life cycle task to show what the task includes.

Label	What the task includes
A	Entering extreme data to check that the system responds correctly to unusual inputs
B	Using flowcharts to show what processing will be done
C	Using the ICT system to manage car parks
D	Checking the system as it is being used to make sure it is still working as expected
E	Preparing instructions for users to show them how to use the ICT system

- 6 (e) (i) 

ICT system life cycle task	Label
Systems Analysis and Design	

 (1 mark)

- 6 (e) (ii) 

ICT system life cycle task	Label
Documentation	

 (1 mark)

- 6 (e) (iii) 

ICT system life cycle task	Label
Testing	

 (1 mark)

- 6 (e) (iv) 

ICT system life cycle task	Label
Monitoring	

 (1 mark)

15
----

**Turn over for the next question**

**Turn over ▶**



7 A school uses an ICT system to register the attendance of pupils. Each pupil has their own identification card.

7 (a) When a pupil arrives at school, the pupil registers by swiping their identification card through a card reader.

Tick **two** boxes to show how information could be recorded on the identification card.

	Tick <b>two</b> boxes
Bar code	
Magnetic stripe	
Questionnaire	
Magnetic Ink Character Recognition (MICR)	
Voice recognition	

(2 marks)

7 (b) Teachers notice that sometimes pupils who are not in class are registered as present.

Tick **three** boxes to show how this could happen.

	Tick <b>three</b> boxes
Some pupils did not register using their identification cards	
Absent pupils gave their identification cards to other pupils who registered for them	
Pupils arrived before the ICT system was switched on	
Some pupils registered using their identification cards then went home	
Some pupils are present in school but not in class as they are rehearsing for a school play	
Some pupils are not wearing school uniform	

(3 marks)

7 (c) (i) Tick **three** boxes to show ways to make registration more accurate.

	Tick <b>three</b> boxes
Ensure pupils can only enter and leave school through turnstiles which are operated using their identification cards	
Print each pupil's identification number on their identification card	
Make identification cards of more robust plastic	
Have only one entrance to the school	
Teachers should closely supervise pupils who are registering using their identification cards	
Allow parents to register their children	

(3 marks)



- 7 (c) (ii) A governor has suggested that registration might be more accurate if pupils used their identification cards to register in every lesson.

Give **one** reason why this might not be done.

.....

.....

(1 mark)

- 7 (d) Tick **three** boxes to show which of these statements are most likely to be true.

	Tick <b>three</b> boxes
Pupils who arrive late do not have to register	
The ICT system automatically contacts parents or carers to let them know if their children are absent	
The identification card has to be replaced every week	
A picture of the pupil is printed on the identification card so that teachers can check it belongs to the pupil using it	
The ICT system automatically e-mails the police to let them know who is absent	
A record of a pupil's attendance is kept on the ICT system	

(3 marks)

- 7 (e) An ICT system for registration could be developed to do other tasks.  
Tick **three** boxes to show other tasks this ICT system could do if developed further.

	Tick <b>three</b> boxes
Enable teachers to access pupils' health records	
Enable pupils to buy food in the school cafeteria instead of using cash	
Allow pupils to travel on the school bus without using cash	
Provide pupils with proof of their age	
Enable pupils to develop their talents in sport or drama	
Allow teachers to buy food in the school cafeteria instead of using cash	

(3 marks)

**Turn over for the next question**

**Turn over ▶**



8 (a) Some convicted criminals complete their sentences at home. They can be fitted with a tag that identifies them. The tag can communicate with the police computer using a wireless network fitted in the home of the criminal. This helps the police computer track the criminal.

8 (a) (i) Tick **three** boxes to show why criminals are tagged.

	Tick <b>three</b> boxes
Criminals are tagged so that neighbours will know who they are	
The location of all criminals can be monitored	
The police like to use the latest technology	
There is a shortage of accommodation in prisons	
The police can spend more time on other tasks	
A criminal can get used to living at home again before their prison sentence is complete	

(3 marks)

8 (a) (ii) Tick **three** boxes to show why tagging may not be effective in tracking criminals.

	Tick <b>three</b> boxes
If the wireless signal is too strong, the police computer cannot know the location of the tag	
If the tag is removed, the police computer will not know the location of the criminal	
If the tag is out of range of the wireless network, the police computer will not know its location	
If the Wide Area Network (WAN) crashes, the police computer will not know the location of the tag	
If the criminal lives close to a mobile telephone mast, the police computer will not be able to communicate with the tag	
The presence of the criminal's family will disturb the wireless signal	

(3 marks)

8 (b) Some dog owners have a microchip implanted under the skin of their dog.

8 (b) (i) Give **one** advantage to the dog owner.

.....  
 .....

(1 mark)

8 (b) (ii) Give **one** other advantage to a dog warden.

.....  
 .....

(1 mark)





8 (c) Some farm animals have a microchip implanted under their skin.

8 (c) (i) Give **one** advantage to the farm animal.

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

8 (c) (ii) Give **one** other advantage to the farmer.

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

8 (d) Describe **three** other methods that could be used to track a British citizen using ICT systems.

Method 1: .....

Method 2: .....

Method 3: .....

(3 marks)

8 (e) It has been suggested that British citizens should carry an identity card.

8 (e) (i) Give **one** advantage to a British citizen.

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

8 (e) (ii) Give **one** disadvantage to a British citizen.

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

**END OF QUESTIONS**



**There are no questions printed on this page**

**DO NOT WRITE ON THIS PAGE  
ANSWER IN THE SPACES PROVIDED**



**There are no questions printed on this page**

**DO NOT WRITE ON THIS PAGE  
ANSWER IN THE SPACES PROVIDED**



**There are no questions printed on this page**

**DO NOT WRITE ON THIS PAGE  
ANSWER IN THE SPACES PROVIDED**

Copyright © 2009 AQA and its licensors. All rights reserved.

