



General Certificate of Secondary Education
2009

Information and Communication Technology

Full Course

Paper 1

Higher Tier

[G5803]



TUESDAY 19 MAY, AFTERNOON

TIME

1 hour 30 minutes.

INSTRUCTIONS TO CANDIDATES

Write your Centre Number and Candidate Number in the spaces provided at the top of this page.

Write your answers in the spaces provided in this question paper.
Answer **all fourteen** questions.

INFORMATION FOR CANDIDATES

The total mark for this paper is 140, including a maximum of 7 marks for quality of written communication.

Figures in brackets printed down the right-hand side of pages indicate the marks awarded to each question or part question.

For Examiner's use only	
Question Number	Marks
1	
2	
3	
4	
5	
6	
7	
8	
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10	
11	
12	
13	
14	
QWC	

Total Marks	
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71

Candidate Number

StudentBounty.com

(d) Select **one** task that cannot be carried out when banking online.

- A Depositing money
- B Ordering a new cheque book
- C Paying bills
- D Cancelling direct debits

Answer _____ [1]

(e) Select **one** advantage of storing graphics in bitmap format.

- A Images are built up in layers
- B Image quality is good
- C Images can be edited at pixel level
- D Images take up very little storage space

Answer _____ [1]

(f) A web browser:

- A Allows users to enlarge text, cannot be used without being connected to the Internet, allows users to enter URLs.
- B Allows users to enlarge text, can be used without being connected to the Internet, allows users to enter URLs.
- C Does not allow users to enlarge text, can be used without being connected to the Internet, allows users to enter URLs.
- D Does not allow users to enlarge text, cannot be used without being connected to the Internet, does not allow users to enter URLs.

Answer _____ [1]

Examiner Only	
Marks	Remark

(j) The csv file format allows:

- A A photograph to be stored and imported into a graphics package.
- B Text to be stored and imported into a database.
- C Music to be stored and imported into an mp3 player.
- D Video to be stored and imported into an mp4 player.

Answer _____ [1]

Examiner Only	
Marks	Remark

2 Computers are now used to control many types of systems such as central heating in buildings and traffic light systems. These control systems make use of **sensors** and **feedback loops**. An **interface** is also used to help process the data.

(a) List **one** sensor which could be used in the traffic lights system.

_____ [1]

(b) Explain the purpose of a **sensor** in any control system.

_____ [2]

(c) What is the role of the **interface** in any control system?

_____ [2]

(d) What is the purpose of **feedback** in the central heating control system?

_____ [1]

Examiner Only	
Marks	Remark

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(Questions continue overleaf)

3 Mark is an ICT trainer. He wishes to use a computer to help him to create training material.

(a) From the list below select the **most appropriate** file format for each output to be produced by Mark. (Use each file format **only once**.)

mp3 bmp doc tiff gif avi xls

Output	File Format
Printed copies of instructions for using spreadsheets	
Sound files of his voice giving instructions on using a database	
Video tutorials on using the wordprocessor	

[3]

Mark has decided to set up a website to sell his training material.

(b) Give **two** advantages to Mark to encourage him to do this.

1. _____

2. _____

[2]

Examiner Only	
Marks	Remark

Mark will need hardware and software to connect to the Internet.

(c) From the list he has written below, select using a tick (✓) the **three** items he will **not require** to access the Internet and web pages.

Equipment	Tick (✓)
Wordprocessor	
Browser	
MODEM	
HTML files	
Broadband link	
Spreadsheet	

[3]

Mark will transfer files onto the Internet.

(d) List **one** protocol which will support this.

_____ [1]

(e) Give **one** piece of advice to Mark to ensure that his website loads quickly when a customer is viewing it.

_____ [1]

Mark decides to sell his products on **DVD** from a stand in the local shopping centre.

(f) Expand the acronym **DVD**.

_____ [1]

Examiner Only	
Marks	Remark

4 A local solicitors' office has installed a new LAN (Local Area Network). The LAN has 30 computers, a server and up to 10 wireless laptops can connect to it. The LAN also provides Internet access for the solicitors.

(a) (i) Give **two** advantages of having a network in the solicitors' office.

1. _____

2. _____
_____ [2]

Networks are expensive.

(ii) Give **one** other disadvantage of installing a network in the office.

- _____
_____ [1]

(iii) List **three** functions of the **server** on a network.

1. _____
2. _____
3. _____ [3]

(b) Give **two** ways in which the solicitors would use Internet access to assist them with their work.

1. _____

2. _____
_____ [2]

Examiner Only	
Marks	Remark

One of the solicitors wants to use her wireless handheld computer when visiting clients.

(c) What is the correct name of the protocol which will support this activity?

(Tick **one** answer **only**)

Protocol	Tick (✓)
Wireless Additional Protocol	
Wireless Application Protocol	
Wire Application Protocol	
Wire Additional Protocol	

[1]

It has been suggested that the solicitors in the office make use of **video conferencing** to meet with solicitors in other countries.

(d) (i) What is **video conferencing**?

_____ [1]

The office manager knows that a computer and a communications link are required for video conferencing.

(ii) List **three** other devices which would be required to provide this facility in the office.

1. _____
2. _____
3. _____ [3]

Examiner Only	
Marks	Remark

(iii) Explain to the office manager how the **bandwidth** of the communications link will affect the video conferencing.

_____ [2]

(iv) Give **two** advantages to the solicitors of using video conferencing rather than email and telephone conversations to talk to solicitors in other countries.

1. _____

2. _____

_____ [2]

The company have had a **fax machine** for many years.

(e) Give **one use** for the fax machine where email is unlikely to be used in the solicitors' office.

_____ [1]

Examiner Only	
Marks	Remark

6 Holiday Villa Hotels have hotels in major cities in Europe. Reservations can be made online, by email, by telephone, or by faxing the central reservations.

Holiday Villa Hotels give special offers online.

(a) (i) Give **one other** advantage **to the customer** of booking a hotel online.

_____ [1]

(ii) Give **one** disadvantage **to the company** of using an online booking system.

_____ [1]

(iii) State **one** reason why a customer may choose to book by telephone.

_____ [1]

As well as using the WWW (World Wide Web) and Internet for business, the company provide an **Intranet** for employees.

(b) (i) Tick (✓) which **three** of the following statements are true about the WWW and the Internet.

Statement	Tick (✓)
The WWW is the information stored on the Internet	
The Internet is a set of web addresses	
The Internet is a network of computers and communication links	
The WWW is a set of web addresses	
To access the WWW you need a web browser	

[3]

Examiner Only	
Marks	Remark

(ii) What is an **Intranet**?

_____ [1]

(iii) Describe **two** ways in which the company could use the Intranet to **benefit employees**.

1. _____

2. _____

_____ [2]

Examiner Only	
Marks	Remark

7 Barry runs a small printing company. He wants to store details about his clients in a database.

(a) Complete the following paragraph using the words provided.
Use each word only once.

REPORT RECORDS CRITERIA FORMS FIELDS TABLE

Data is stored in tables of _____. Each record is made up of _____ . A database package allows users to query data which meet _____. _____ can be used to capture data on screen. [4]

Examiner Only	
Marks	Remark

8 “Clarendon Limos” are a small Limousine hire company. They have four cars. Below is part of a spreadsheet with their car hire information for the month of November 2008.

	A	B	C	D	E	F	G
1	Clarendon Limos – Income November 2008						
2	Car	Cost Per Hour	Number of Hours Hired	Total Income	Fuel Cost Per Hour	Total Fuel Cost	Total Profit for each Car
3	Yellow Hummer Vehicle	£ 400.00	35	£ 14 000.00	£ 100.00	£ 3 500.00	£ 10 500.00
4	Stretch Limousine	£ 500.00	19	£ 9 500.00	£ 120.00	£ 2 280.00	£ 7 220.00
5	Stretch Hummer Vehicle	£ 550.00	9	£ 4 950.00	£ 115.00	£ 1 035.00	£ 3 915.00
6	Pink Cadillac	£ 700.00	10	£ 7 000.00	£ 140.00	£ 1 400.00	£ 5 600.00
7							
8	Total Profit						£ 27 235.00

(a) Cells **A8:F8** have been: (circle the correct answer from the list below)

Cleared Merged Pasted Deleted [1]

(b) Using cell references, write down the **formula** used in each of the following cells.

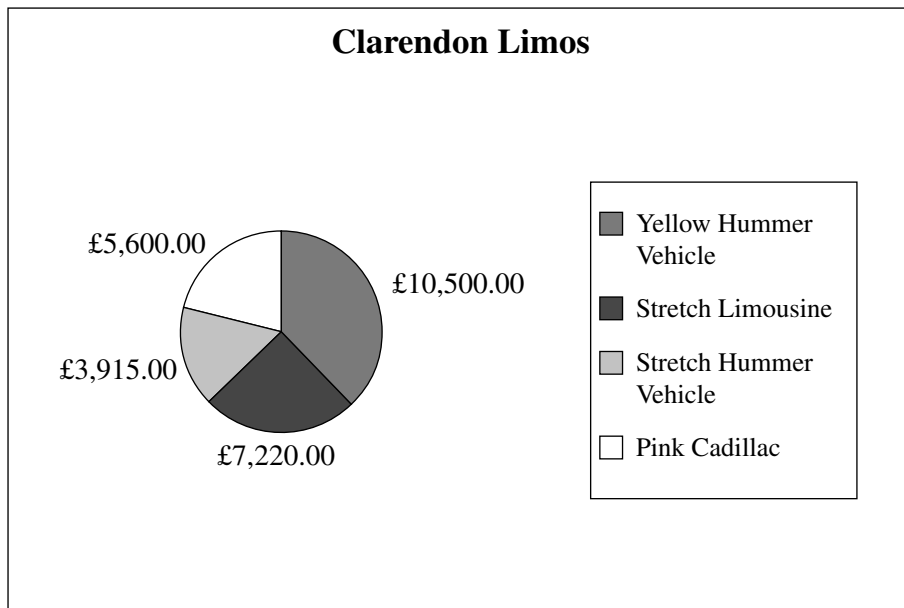
(i) **D6** _____ [1]

(ii) **G6** _____ [1]

(iii) **G8** _____ [1]

Examiner Only	
Marks	Remark

(c) The chart below has been produced from the spreadsheet data.



(i) List the **cell references** of the two cell ranges used to produce this chart.

Cell range 1: _____

Cell range 2: _____ [2]

(ii) Give **one** advantage to Clarendon Limos of viewing information in chart form.

 _____ [1]

(iii) Give **one** piece of information that Clarendon Limos can see by examining the chart.

 _____ [1]

(iv) Apart from using colour, suggest **one** way in which the chart could be improved.

 _____ [1]

Examiner Only	
Marks	Remark

(d) Clarendon Limos have decided to hire drivers and need to include the cost of drivers in the spreadsheet.

	A	B	C	D	E	F	G	H
1	Clarendon Limos – Income November 2008							
2	Car	Cost Per Hour	Number of Hours Hired	Total Income	Fuel Cost Per Hour	Total Fuel Cost	Driver Costs	Total Profit
3	Yellow Hummer Vehicle	£ 400.00	35	£ 14 000.00	£ 100.00	£ 3 500.00	£ 1 050.00	£ 9 450.00
4	Stretch Limousine	£ 500.00	19	£ 9 500.00	£ 120.00	£ 2 280.00	£ 570.00	£ 6 650.00
5	Stretch Hummer Vehicle	£ 550.00	9	£ 4 950.00	£ 115.00	£ 1 035.00	£ 270.00	£ 3 645.00
6	Pink Cadillac	£ 700.00	10	£ 7 000.00	£ 140.00	£ 1 400.00	£ 300.00	£ 5 300.00
7								
8								£ 25 045.00
9								
10								
11								
12								
13	Driver Costs Per Hour	£ 30.00						

(i) Write down the **formula** for cell **G6**.

G6: _____ [1]

John decides to use an **absolute cell reference** when calculating the **Driver Costs**.

(ii) What is an **absolute cell reference**?

 _____ [2]

(iii) Which cell on the spreadsheet above should be included in the formula as an absolute cell reference?

_____ [1]

(iv) How could using an absolute cell reference keep John's work to a minimum when making changes to **this** spreadsheet?

 _____ [1]

Examiner Only	
Marks	Remark

9 Arlene is word processing her Chemistry coursework.

She wishes to include her candidate number in a header and page numbers in a **footer**.

(a) What is a **footer**?

[1]

After she has added her **page numbers** to the document she goes into the page setup and selects an option for different first page headers and footers.

(b) Give **one** reason why she might do this.

[1]

Arlene has copied a graphic from the Internet. When it is clicked she is automatically taken to the original website.

(c) What must she do to prevent this from happening?

[1]

When she runs the spellchecker, it highlights a lot of words that Arlene knows are spelt correctly.

(d) Give **one** reason why the spellchecker might still highlight these.

[1]

(e) Give **one** example when the spellchecker may **not highlight** a word when it is spelt incorrectly.

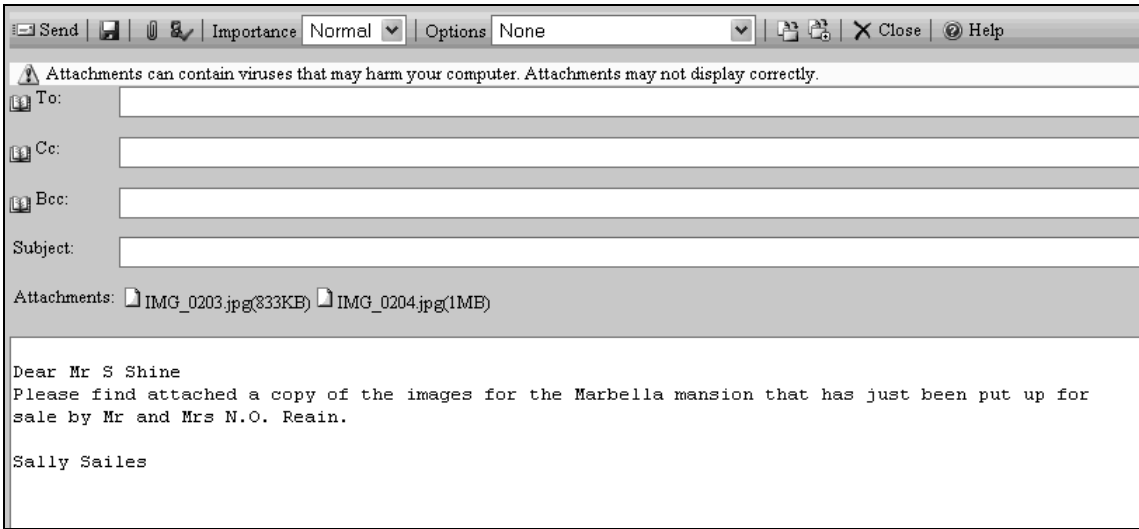
[1]

Examiner Only	
Marks	Remark

10 SunShine Properties sell houses all around the world. One of their employees wants to send an email to their manager at manager@sunshineproperties.co.uk.

(a) Read and complete the following email to the manager so that:

- (i) The employee is sending the email to the correct person and [1]
- (ii) The person receiving the email knows what it relates to before they open it [1]



The warning shown on the email tells the employee that **Attachments may not display correctly**.

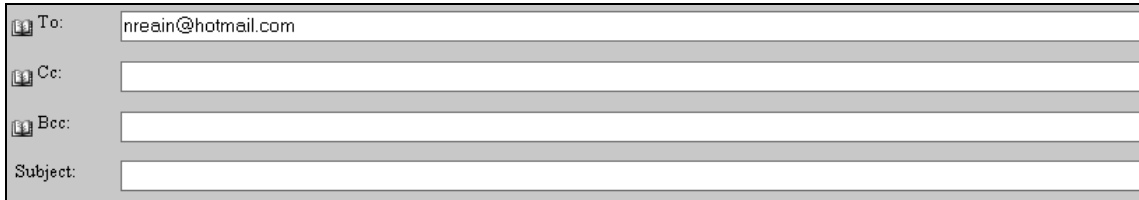
(b) Give **one** reason why attachments may not display correctly when they are opened by the recipient.

[1]

Examiner Only	
Marks	Remark

The agent needs to send a copy of the email to Mr and Mrs Reain and the manager. The agent does not want Mr and Mrs Reain to see the email address for their manager.

(c) Write the manager's address in the correct place in the section of the email shown below.

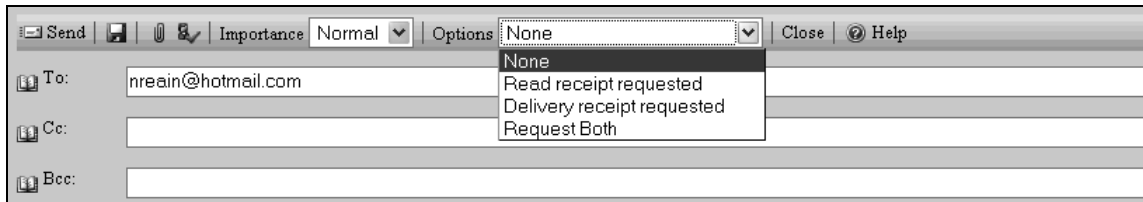


The screenshot shows an email composition window with the following fields:

- To: nreain@hotmail.com
- Cc: [Empty]
- Bcc: [Empty]
- Subject: [Empty]

[1]

(d) The employee wants to know when the email has been opened, but does not know whether she should select "Read receipt requested" or "Delivery receipt requested".



The screenshot shows an email composition window with the 'Options' dropdown menu open. The options are:

- None
- Read receipt requested
- Delivery receipt requested
- Request Both

(i) Explain the difference between the two options.

[2]

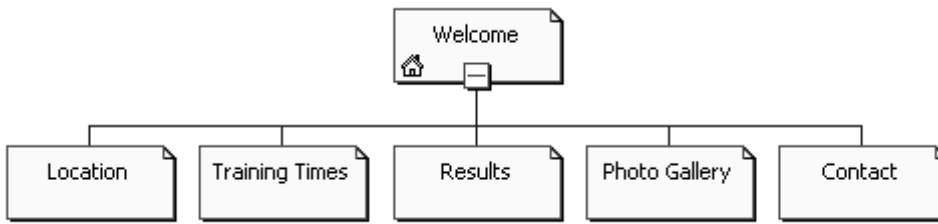
(ii) State which option she should select so that she knows that the email has been opened.

[1]

Examiner Only	
Marks	Remark

BLANK PAGE

12 June designed a website for her son’s sports club. The site she created has the following pages:



June is not sure what format she should use when she is saving the web pages.

(a) Tick (✓) **one** option below that is **not** an appropriate file format to use when saving web pages.

File Format	Tick (✓)
.htm	
.http	
.html	

[1]

When she has completed the website she tests it on **one** web browser only.

(b) Why is this not a good idea?

[1]

Examiner Only	
Marks	Remark

14 Using the terms in the list below, choose **one** term that best matches the definition in the left-hand column (not all words in the list will be used).

- | | | | |
|-------------------|--------------------|-------------------|------------------|
| Virus | Pixel | HTTP | Hard Disk |
| CD-Rom | Analogue | Encryption | RSI |
| Resolution | Check Digit | Scanner | Protocol |
| Digital | ISP | Hacking | |

Definition	Term
A program designed to damage a computer system.	
A digit added to the beginning or end of a number to verify that the number entered is an authentic code.	
A way of encoding data before transmitting it on a network.	
A company which provides the user with a connection to the Internet.	
A measure of the quality of an image.	
A device used to capture data by passing light over the image.	
An optical storage device.	
An injury which occurs as a result of using the same wrist muscles over and over again.	
A set of rules which govern the way in which data is transmitted on a network.	
A name used to describe data held as 1s and 0s.	

[10]

Examiner Only	
Marks	Remark
Quality of written communication	

