Centre No.						Surname	Initial(s)
Candidate No.						Signature	

Paper Reference(s)

4385/1F

Examiner's use only

Team Leader's use only

London Examinations IGCSE

Information and Communication Technology

Paper 1F

Foundation Tier

Friday 17 November 2006 – Morning

Time: 1 hour 30 minutes

Question Number	Leave Blank
1	
2	
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11	
12	
13	
14	
Total	

Materials required for examination
Nil

Items included with question papers
Nil

Instructions to Candidates

In the boxes above, write your centre number, candidate number, your surname, initial(s) and signature.
The paper reference is shown at the top of this page. Check that you have the correct question paper.
Answer **ALL** the questions in the spaces provided in this question paper.

Information for Candidates

There are 12 pages in this question paper. All blank pages are indicated.
The total mark for this paper is 100. The marks for the various parts of questions are shown in round brackets: e.g. **(2)**.

Advice to Candidates

You are reminded of the importance of clear English and careful presentation in your answers.
Include diagrams in your answers where these are helpful.

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Answer ALL questions

1. List **five** different storage media or devices.

1 .....

2 .....

3 .....

4 .....

5 .....

Q1

(Total 5 marks)

2. A search engine may be used to find information from the Internet.

(a) Describe how a search engine is used to find information about holidays in Mexico.

.....

.....

.....

.....

(2)

(b) Sometimes a search engine displays information that children should not see. Describe **one** way to prevent this information being displayed.

.....

.....

.....

(2)

(c) Apart from inappropriate material, state **three** other problems or hazards which might occur when finding information from the Internet.

Problem / hazard 1 .....

Problem / hazard 2 .....

Problem / hazard 3 .....

(3)

Q2

(Total 7 marks)

Leave blank

3. A company sells wood and uses the following spreadsheet to calculate prices.

	A	B	C	D	E	F
1	Wood type. Enter first letter	Cost per cubic metre	Diameter in metres	Length in metres	Volume in cubic metres	Price
2	E	£160	1.2	5.6	6.33	£1,013.35
3						
4	Beech	Chestnut	Elm	Oak	Sycamore	Willow
5	B	C	E	O	S	W
6	£120	£145	£160	£130	£80	£95

Each cell is named by a column letter and a row number. For example, the word 'Price' is in the cell named F1.

Each cell in the spreadsheet is formatted as text, number or currency and may also contain a formula or a function.

(a) Name a cell that contains a formula. .....

(1)

(b) Name a cell that contains a function. .....

(1)

(c) State the format of the following cells:

(i) cell B6, ...

(ii) cell C2, ...

(iii) cell E1. .....

(3)

The area shown with a thick outline is a horizontal look-up (HLOOKUP) table. The HLOOKUP is done using cells A2 and B2.

(d) When the price of Elm in cell C6 is changed to £165, two other cells will have their contents changed automatically. Name the cells that will change.

....

(2)

(e) The letters in row 5 of the spreadsheet must be in alphabetical order. State what would happen if they were not in alphabetical order.

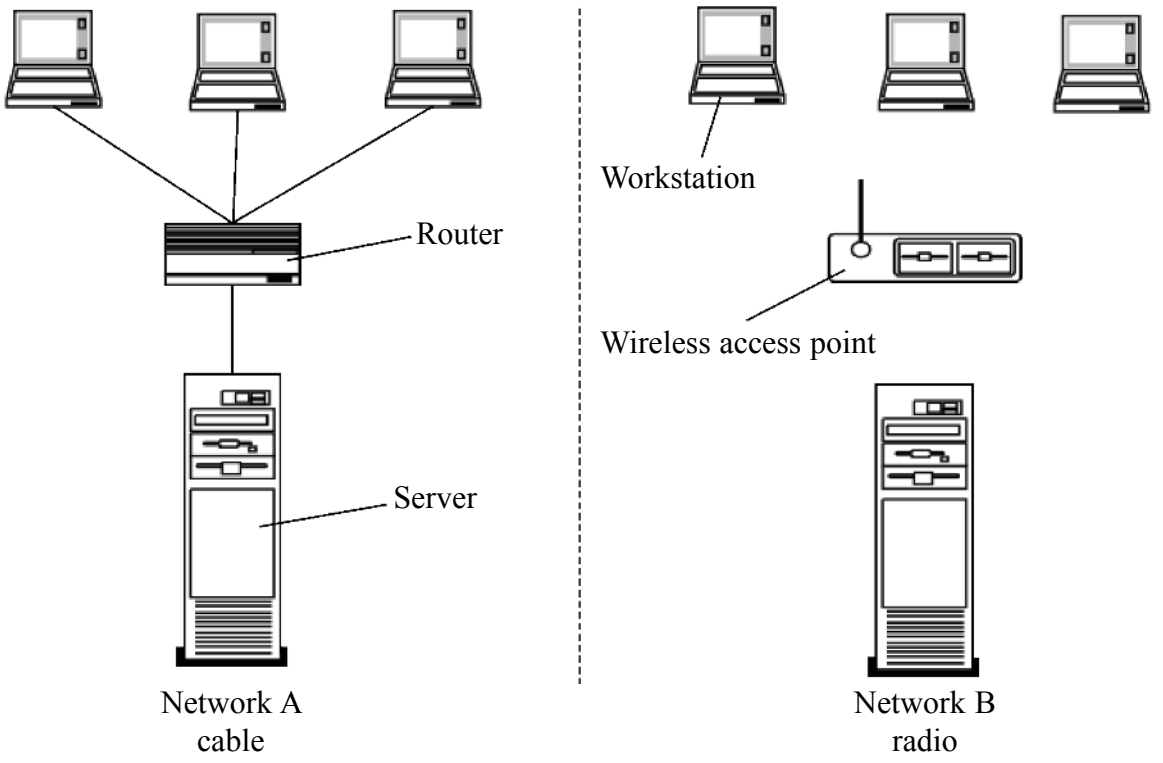
.....

(1) **Q3**

(Total 8 marks)

Leave blank

4. The diagram shows two Local Area Networks (LANs) in an office. Network A is connected by cable; Network B is connected by radio.



(a) Apart from the method of connection, state **three** differences between a radio network and a cable network.

Difference 1 .....

Difference 2 .....

Difference 3 .....

(3)

(b) State the purpose of

(i) the server, ...

(ii) the router, ...

(iii) the wireless access point. .....

.....

(3)

(c) The two networks can be connected by a cable to form a single LAN. The cable joins two pieces of equipment. On the diagram, draw a line to show which two pieces of equipment should be joined.

(2) **Q4**

(Total 8 marks)

Leave blank

5. Sarah is making a database for her school library. The database will be used by the librarians to control the lending of books.

(a) Sarah must design a test plan for the database. She decides to use the three different types of test data listed below. Briefly explain each type of test data for this application.

Typical data .....

Invalid data .....

Extreme data .....

(3)

(b) Sarah writes a user guide for the librarians. State **three** items which should be in the guide.

Item 1 .....

Item 2 .....

Item 3 .....

(3)

(c) Sarah also writes a guide for the database administrator. This contains technical information about the database such as table structures, macros and queries. Explain why this guide is required.

.....

.....

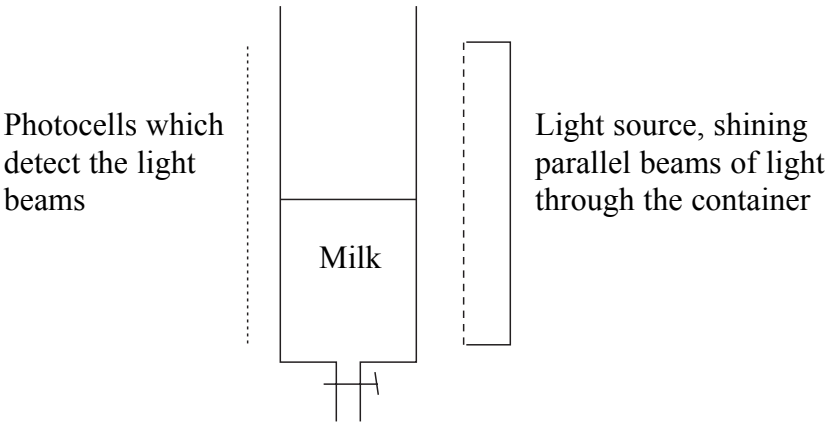
(2)

Q5

(Total 8 marks)

Leave blank

6. A farmer uses a milking machine to milk a cow. The machine measures the amount of milk given by the cow.



(a) The diagram shows the milk held in a glass container with light beams shining through it at different heights. Explain how the beams can be used to measure the height of milk in the container.

.....

.....

(2)

(b) The machine contains a microprocessor. The microprocessor uses a look-up table, and the amount of milk given by the cow, to decide how much food to give to the cow. State the **two** data items that would be in the look-up table.

Data item 1 .....

Data item 2 .....

(2)

(c) The machine is used to milk several cows. The machine records the amount of milk given by each cow. The farmer can look at the data later. State a suitable type of software package for recording the data. Give **two** reasons for your answer.

Software type .....

Reason 1 .....

Reason 2 .....

(3)

(d) Each cow wears a collar which contains a radio transmitter. State **two** ways in which the radio signal would be useful in this application.

1 .....

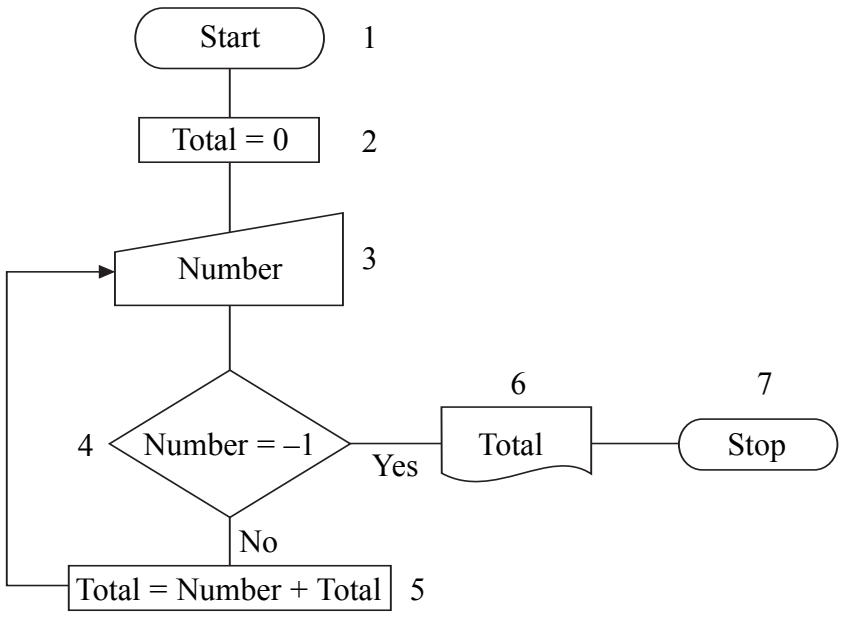
2 .....

(2) **Q6**

(Total 9 marks)

Leave blank

7. A student is asked to write a computer program that will accept a series of positive numbers and print the total of those numbers. The student makes the algorithm shown below. The boxes have been numbered.



(a) State what happens at

(i) box 3,

.....

.....

(1)

(ii) box 6.

.....

(1)

(b) State the purpose of

(i) box 4,

.....

(1)

(ii) box 5.

.....

(1)

(c) Explain what would happen if box 2 were placed between box 3 and box 4.

.....

.....

(1) **Q7**

(Total 5 marks)

Leave blank

8. The following table shows some of the fields in a database about hotels. Complete the table, using a **different** validation method for each field.

Field name	***Example data***	***Validation method*** **Use a different method for each field**	***Validation description***
Hotel name	The Regency		
Star rating	*****		
Number of rooms	136		
Date of next price review	25/05/2007		

(Total 8 marks)

Q8

9. A businessman has a computer which is connected to the Internet. He is concerned that other people may be able to use the connection to look at his files.

State **three** measures that the businessman could take to prevent people reading his files over the Internet connection. Briefly describe how each measure works.

Measure 1 .....

Description 1 .....

.....

Measure 2 .....

Description 2 .....

.....

Measure 3 .....

Description 3 .....

.....

(Total 6 marks)

Q9

Leave blank

10. A marketing company carries out a survey in a town centre. Shoppers are shown some statements and asked to enter a response on a laptop computer. Each statement is on a different screen and has five possible responses.

(a) One of the statements is: "The town centre is kept clean and tidy".

The responses are:

1 Strongly agree
2 Agree
3 Not sure
4 Disagree
5 Strongly disagree

Using this example, design a suitable input screen.

(5)

Shoppers who complete the survey are asked to give their telephone number and are entered into a prize draw.

(b) The telephone number must be entered twice. State the name of this process and give a reason why it is done.

Process name .....

Reason .....

.....

(2)

Q10

(Total 7 marks)

Leave blank

11. Benjamin uses a flat-bed scanner to transfer a picture to an art package. The scanner can be set to use 8-bit, 16-bit or 32-bit colour.

(a) Explain the difference between 8-bit and 16-bit colour.

.....

.....

.....

(2)

(b) The art package can process the picture in 8-bit, 16-bit or 32-bit colour. Benjamin wants to use the picture for a web site. Give **two** reasons why he prefers to use the 8-bit setting.

Reason 1 .....

Reason 2 .....

(2)

(c) Benjamin scans the picture at a resolution of 600 dots per inch. He finds that the resulting file has a size of 32 Megabytes. Briefly describe **two** methods by which Benjamin can reduce the file size.

Method 1 .....

.....

Method 2 .....

.....

(4)

Q11

(Total 8 marks)

Leave blank

12. A cycling club has its own web site, with a youth section for its younger members. The web site is part of a web ring.

(a) (i) Describe what is meant by a web ring.

.....

.....

(2)

(ii) State **two** reasons for the cycling club to belong to a web ring.

Reason 1 .....

Reason 2 .....

(2)

(b) The youth section of the web site contains a moderated chat room.

(i) State what is meant by the term moderated in this context.

.....

.....

(1)

(ii) Explain why the web master requires the chat room to be moderated.

.....

.....

(2) **Q12**

(Total 7 marks)

Leave blank

13. An engineer is asked to design a new footbridge. He decides to use a software package to model different bridge designs.

(a) Explain what is meant by **to model** in this context.

.....

.....

(2)

(b) Give **two** reasons why the engineer would use computer modelling in designing a bridge.

Reason 1 .....

Reason 2 .....

(2)

(c) Give **two** reasons why the specifications of the completed bridge might not match those obtained from the computer model.

Reason 1 .....

Reason 2 .....

(2)

(d) Describe another context where a computer model could be used.

.....

.....

.....

(2) **Q13**

(Total 8 marks)

14. The central processing unit (CPU) has four key roles. One of these is to store data. An example is when a number is stored in the CPU to use in a calculation.

State the other **three** key roles of the CPU. Give an example in each case.

Role 1 .....

Example .....

Role 2 .....

Example .....

Role 3 .....

Example **Q14**

(Total 6 marks)

TOTAL FOR PAPER: 100 MARKS

END