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

Paper Reference(s)

4385/2H

London Examinations IGCSE

Information and Communication Technology

Paper 2H

Higher Tier

Friday 17 November 2006 – Morning

Time: 1 hour 30 minutes

Materials required for examination
Nil

Items included with question papers
Nil

Examiner's use only

Team Leader's use only

Question Number	Leave Blank
1	
2	
3	
4	
5	
6	
7	
8	
9	
10	
11	
12	
13	
14	
Total	

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 16 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.

Printer's Log. No.
N24688A
W850/U4385/57570 3/3/3/600

N 2 4 6 8 8 A 0 1 1 6

Turn over

edexcel INTERNATIONAL

Leave blank

Answer ALL questions

1. 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		

Q1

(Total 8 marks)

2. 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 .....

.....

Q2

(Total 6 marks)

Leave blank

3. 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)

Q3

(Total 7 marks)

Leave blank

4. 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)

Q4

(Total 8 marks)

Leave blank

5. 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) **Q5**

(Total 7 marks)

Leave blank

6. 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) **Q6**

(Total 8 marks)

Leave blank

7. 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 .....

(Total 6 marks)

Q7

8. Flash memory devices have a higher storage capacity than CDs. Despite this, computer game manufacturers sell games on CDs rather than on flash memory devices.

(a) Give **three** reasons why manufacturers might prefer to sell games on CDs rather than on flash memory devices.

Reason 1 .....

Reason 2 .....

Reason 3 .....

(3)

(b) A Zip disk can also be used for data storage. Explain the difference between a Zip disk and a CD.

.....

.....

(2)

(Total 5 marks)

Q8

Leave blank

9. An ICT teacher sets his class a quiz which requires them to find information from the Internet. The class is told about a number of different ways to find information, for example, using a search engine.

(a) Describe **two** other ways by which the students can find information from the Internet.

1 .....

.....

2 .....

.....

(2)

(b) One of the quiz questions is "Which type of tree has the biggest leaves?". One student enters

biggest leaves

into a search engine and gets 34,654 results. Most of the results have nothing to do with the required information. Explain how the student should use the search engine to get a small number of relevant results.

.....

.....

.....

.....

(3)

(c) Despite copying information from the Internet correctly, some students end up with incorrect answers to the quiz. Give **two** reasons why this might happen.

Reason 1 .....

.....

Reason 2 .....

.....

(2)

Q9

(Total 7 marks)

Leave blank

10. 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

(a) State the formula which will be in cell F2.

.....

(2)

(b) The area shown with a thick border is a horizontal look-up table (HLOOKUP). Describe how the table is used in this spreadsheet.

.....

.....

.....

(3)

(c) Sales of more than £5 000 must be referred to head office. Write an IF statement which would display an alert if the price were over £5 000.

.....

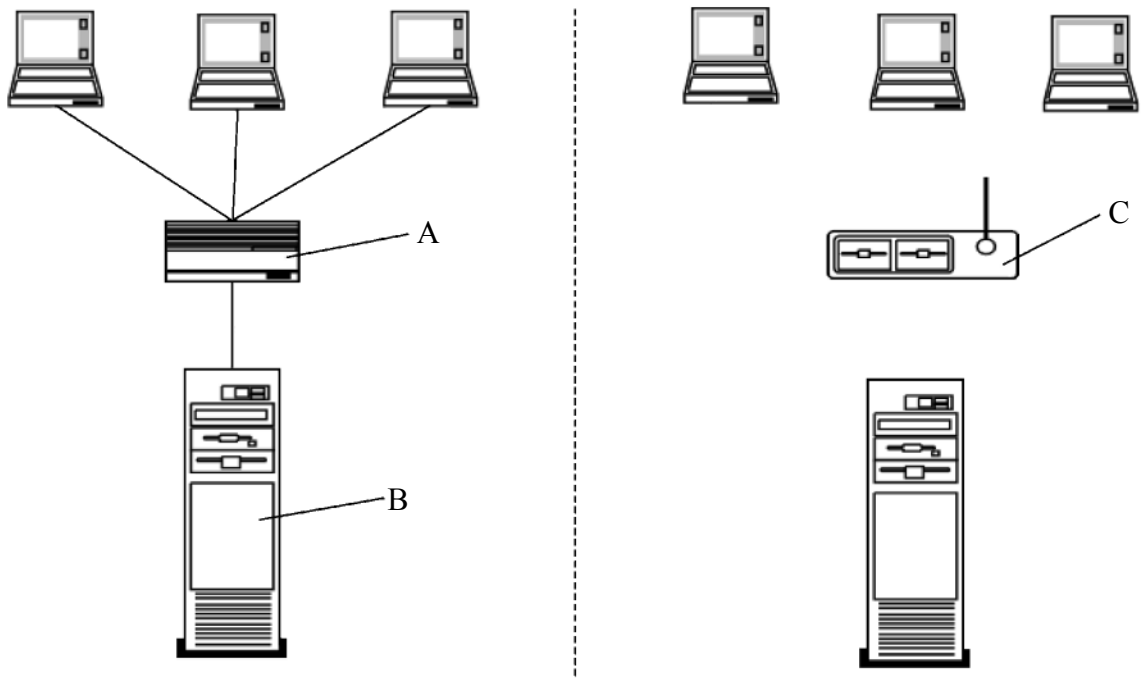
.....

(3) **Q10**

(Total 8 marks)

Leave blank

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



(a) Name the items of equipment labelled **A**, **B** and **C**. State the function of each.

A .....

Function .....

B .....

Function .....

C .....

Function .....

(6)

(b) The two networks can be connected to form a single LAN. Describe how this could be done. Sketch any additional equipment or connections on the diagram.

.....

.....

(2)

Q11

(Total 8 marks)

Leave blank

12. 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. Describe **three** different types of testing which Sarah might use.

Test type 1 .....

.....

Test type 2 .....

.....

Test type 3 .....

.....

(6)

(b) Sarah must produce user guides for the database administrator and for the librarians. State **two** items which should be in the guide for the administrator, but **not** in the guide for the librarians.

Item 1 .....

Item 2 .....

(2)

Q12

(Total 8 marks)

Leave blank

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

(a) Describe how the machine could measure the amount of milk.

.....

.....

.....

(2)

The machine puts some food into a feeding trough. The amount of food depends on the amount of milk.

(b) Describe the processing that is needed to decide how much food to put into the trough.

.....

.....

.....

.....

.....

(4)

(c) The machine is used to milk several cows. Describe a method for automatically identifying which cow is being milked.

.....

.....

.....

.....

.....

(3)

Q13

(Total 9 marks)

Leave blank

14. A student is asked to write a computer program which will perform the following steps:

- accept a series of numbers as input from a keyboard
- accept an entry of –1 to show that there are no more numbers to be input
- print the total, not including the –1.

Produce an algorithm for the program, using structured English or a flowchart.

Q14

(Total 5 marks)

TOTAL FOR PAPER: 100 MARKS

END

BLANK PAGE

BLANK PAGE

BLANK PAGE