GCE AS/A level

1241/01

INFORMATION AND COMMUNICATION TECHNOLOGY – IT1
Information Systems

A.M. THURSDAY, 17 January 2013

2¼ hours

INSTRUCTIONS TO CANDIDATES

Use black ink or black ball-point pen. Do not use pencil or gel pen. Do not use correction fluid.

Write your name, centre number and candidate number in the spaces at the top of this page.

Answer **all** questions.

Answers should be written in the spaces provided. Where the space is not sufficient for your answer use a continuation sheet, taking care to number the continuation correctly.

The intended marks for questions or part questions are given in brackets [ ]. You are advised to divide your time accordingly. The total number of marks available is 80.

You are reminded of the necessity for good written communication and orderly presentation in your answers.

Quality of written communication will be assessed in question 8 *(a)*.

Make sure you hand in your spreadsheet with this booklet at the end of the examination.

For Examiner's use only		
Question	**Maximum mark**	**Mark awarded**
1	**6**	
2	**6**	
3	**4**	
4	**6**	
5	**6**	
6	**6**	
7	**8**	
8	**18**	
9	**4**	
10	**16**	
Total	**80**	

SECTION A

Answer **all** *questions.*

1. An ICT system needs a good Human Computer Interface (HCI). Describe an actual use, an advantage, and a disadvantage for **each** of the following HCI.

    (a)   Biometric device   [3]

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    (b)   Command Line   [3]

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2. Data is often encoded before it is entered into a computer. One of the advantages of encoding data is that *it saves time typing in the data*.

(a) Give **two** *other* advantages of encoding data before entering it into the computer. [2]

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(b) Encoding data can lead to inaccurate results. Identify **two** different ways this could happen and illustrate **each** with an appropriate example. [2×2]

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3. A large firm has installed a network.

(a) Other than *sharing peripherals* and *email*, describe **three** benefits that networking would give the firm. [3]

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(b) The firm also installs an Intranet. Define what is meant by the term Intranet. [1]

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4. A DVD hire business makes use of database software. Define **each** of the following functions of the software and give an appropriate example of how **each** could be used by the business.

(a) Query [2]

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(b) Report [2]

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(c) Import/export [2]

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5. Companies use validation and verification methods to reduce data entry errors in their online shopping systems.

(a) Using an example, name and describe in detail **one** validation method used in online shopping systems. [3]

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(b) Define the term *verification*. Name and describe **one** verification method used in online shopping systems. [3]

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6. Other than faster *searching* and faster *processing of data* describe, using suitable examples in **each** case, **three** other advantages of ICT over manual methods of data processing. [3×2]

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7. Expert Systems are widely used in medicine. State the **three** main components of every expert system and describe the advantages and disadvantages of using an expert system in medicine. [8]

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8. Developments in the use of ICT have had an impact on home entertainment.

(a) Describe using distinctly different examples, **four** uses of ICT for home entertainment and for **each** discuss an advantage and a disadvantage.
Do not write about health concerns in your answer. [12]

(b)   Describe **two** health concerns associated with the use of ICT in home entertainment.[6]

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SECTION B

Answer **all** *questions.*

9. *(a)* Define what is meant by *simulation modelling.* [1]

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(b) Describe a specific use of simulation modelling in financial forecasting and give **two** advantages for this use. [3]

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YOU MUST REFER TO YOUR OWN SPREADSHEET TO ANSWER THE FOLLOWING QUESTION.

IF NO SPREADSHEET EVIDENCE IS SUBMITTED THEN NO MARKS CAN BE AWARDED.

MAKE SURE THAT YOU SHOW IN YOUR ANSWER WHERE THE FUNCTIONS/ FORMULAS CAN BE FOUND IN YOUR SPREADSHEET.

10 *(a)* Describe the purpose of **one** function from List A and **two** functions from List B, which you have used in your spreadsheet.

 A: SUM, COUNT, MAX, MIN, AVERAGE, RAND
 B: Single IF, Multiple IF, DATE, ROUND   [6]

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(b) Describe in detail **two** methods you used in your spreadsheet to ensure that incorrect data was not used in your spreadsheet. [6]

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(c) Describe the purpose or function of **each** of the following used in your spreadsheet:

(i) Search [2]

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(ii) Sort [2]

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END OF PAPER

**ENSURE YOU ATTACH THE PRINTOUTS OF YOUR SPREADSHEET TO YOUR
EXAMINATION ANSWER PAPER**