GCE AS/A level

1241/01

INFORMATION AND

COMMUNICATION TECHNOLOGY – IT1

INFORMATION SYSTEMS

P.M. MONDAY, 3 June 2013

2¼ hours plus your additional time allowance

Surname _____

Other Names _____

Centre Number _____

Candidate Number 2 _____

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

INSTRUCTIONS TO CANDIDATES

Use black ink, black ball-point pen or your usual method.

Write your name, centre number and candidate number in the spaces provided on the front cover.

Answer ALL questions.

Answers should be written in the spaces provided. Where the space is not sufficient for your answer continue the answer at the back of the book, 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.

SECTION A

Answer ALL questions.

1   An ICT system needs a good Human Computer Interface (HCI). For EACH of the following HCI give an example of HOW IT COULD BE USED and also ONE advantage and ONE disadvantage.

(a)   Voice interfaces.   [3]

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1(b)   Touch sensitive screens.   [3]

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2 **Good quality information is needed to make informed decisions.**

(a) **OTHER THAN 'COMPLETE', describe FOUR DIFFERENT characteristics of good quality information. [4]**

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2(b) **Describe using DISTINCTLY DIFFERENT examples, TWO of the costs involved in getting good quality information.   [4]**

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3   **Name and describe TWO DIFFERENT crimes covered by the Computer Misuse Act, illustrating your answer with distinct examples.   [4]**

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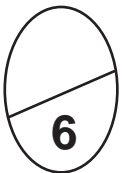
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4 **A company uses word processing/DTP software. Define EACH of the following functions of word processing/DTP software and give an APPROPRIATE example of how EACH can be used by the company.   [6]**

(a) **Templates.**

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4(b)   Macros.

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4(c)   Mailmerge.

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5(a) **Validation is very important in modern data processing systems.**

    (i) **Define what is meant by the term 'VALIDATION'.** **[1]**

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    (ii) **Using an example, name and describe, a validation method that could be used in a student record keeping system.** **[3]**

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5(b) **Other than the data itself, describe FOUR factors that could affect the efficiency of data processing systems.   [4]**

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6 **Listed below are four features of a CAD package.**

HATCHING/RENDERING   **WIREDRAWING**
WALKTHROUGH   **ROTATE**

Describe how EACH could be used by an architect when designing a house.   [4]

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7 **Schools and colleges make use of distance learning AND Computer Assisted Learning (CAL) software.**

(a) **Describe TWO advantages and ONE disadvantage of DISTANCE LEARNING.   [3]**

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7(b) **Describe TWO advantages and ONE disadvantage of CAL software. Do not give the same advantages and disadvantage as in part (a).   [3]**

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8   A multi-national supermarket company has many branches.

(a)   The supermarkets make use of BARCODES for recording sales. Describe what a barcode on a product is and give ONE advantage and ONE disadvantage of using barcodes to input data in the supermarkets.   [4]

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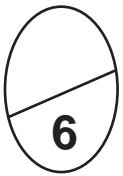
8(b) **'JUST IN TIME' control systems are used extensively for stock control in the supermarkets. Describe how 'just in time' stock control works after a barcode is scanned at a Point of Sales (POS) terminal.   [4]**

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8(c) **Discuss the advantages and disadvantages 'JUST IN TIME' stock control offers the supermarkets. [6]**

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8(d) **The company also has an ON-LINE SHOPPING facility. Describe FOUR DIFFERENT benefits that on-line shopping offers the COMPANY and its CUSTOMERS.   [4]**

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SECTION B

Answer ALL questions.

9   **Simulation modelling is very important in weather forecasting. Describe how the models are created and give ONE advantage and ONE disadvantage that simulation modelling has brought to weather forecasting.   [4]**

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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 TWO functions from the list below, which you have used in your spreadsheet.   [2×2]**

SINGLE IF,   MULTIPLE IF,   DATE,   ROUND

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10(b) Describe the purpose of a VLOOKUP function you used in your spreadsheet.   [3]

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10(c) **Describe a validation method you used to ensure that invalid data was not used in your spreadsheet.** **[3]**

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10(d) Describe the purpose of:

      (i)   A graph, you used in your spreadsheet. [2]

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10(d) (ii) Two other functions/formulas you used in your spreadsheet. [2×2]
YOU MAY NOT USE ANY FUNCTION MENTIONED IN 10(a), 10(b) or 10(c).

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END OF PAPER

Ensure you attach the printouts of your spreadsheet to your examination answer paper.