GCE AS/A level

1241/01

INFORMATION AND COMMUNICATION TECHNOLOGY

IT 1

INFORMATION SYSTEMS

P.M. TUESDAY, 18 May 2010

$2\frac{1}{4}$ hours

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

INSTRUCTIONS TO CANDIDATES

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

Answer **all** questions.

Write your answers in the spaces provided in this booklet. 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.

You must refer to your own spreadsheet to answer Question 10.

SECTION A

*Answer **all** questions*

1. A good Human Computer Interface (HCI) is important in an ICT system. For **each** of the following HCI give an example of its use, and also **one** advantage and **one** disadvantage. [2×3]

   (a) Command Line

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   (b) Graphical User Interface

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2. *(a)* The performance of a company has been improved by having up-to-date, accurate and complete information.

Other than by aiding the decision making process, describe, using different examples, **two** ways in which good quality information can add value to the company. [2×2]

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(b) Describe **two** of the costs in terms of money, time and human resources in obtaining good quality information.
Use a suitable, *different* example to illustrate your answer in **each** case. [2×2]

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Turn over.

3. An architect uses Computer Aided Design (CAD) software. Describe an *advantage* of **each** of the following features of CAD software to the architect, when designing a new building.

<div align="center">

Rotate,   *stress/strain,*   *wire drawing,*   *walkthrough*   [4]

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4. Information Systems are used to process large amounts of data.

(a) Other than the quality of data being entered, describe **three** factors affecting the efficiency of data processing systems. [3]

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(b) ICT systems process data faster then manual systems. Describe **two** *additional* advantages of ICT over manual methods of data processing using suitable examples in **each** case. [2×2]

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Turn over.

5. *Validation* and *verification* are very important in online shopping systems.

(a) Explain in detail the difference between validation and verification. [2]

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(b) Describe, using suitable *different* examples how **both** validation and verification are used to reduce data entry errors in online shopping systems. [2×2]

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6. Database programs are often used for medical record keeping. Define **each** of the following functions of a database and give an appropriate example of its use in this context. [3×2]

(a) Query

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(b) Report

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(c) Import/export

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Turn over.

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7. A person has decided to network the standalone computers in their home.

    (a) Discuss the advantages and disadvantages of networks, when used in *the home*. [3]

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    (b) Describe the benefit of having access to the Internet at home. [2]

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8. Schools use ICT systems for administration and for teaching and learning.

(a) Discuss the different methods of registration that are used in schools, looking at both the benefits and drawbacks that they bring to schools. [8]

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Turn over.

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(b) Discuss the benefits and drawbacks of using ICT to support teaching and learning using appropriate examples to illustrate your answer. [10]

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SECTION B

*Answer **all** questions*

9. Weather forecasting is one area which now uses simulation modelling. Describe, in general, how the models are created and the advantage and disadvantage of modelling in this context. [4]

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Turn over.

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

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

PLEASE ENSURE THAT YOU NUMBER THE PAGES OF YOUR EVIDENCE AND REFER TO THIS NUMBERING IN YOUR ANSWERS.

10. *(a)* Describe the purpose or function of **two** different formulas from *the list below*, which you have used in your spreadsheet. [2×2]

SINGLE IF, MULTIPLE IF, DATE, ROUND

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(b) (i) Identify where you used a *macro* in your spreadsheet and describe its purpose. [2]

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(ii)   Identify where you used a *graph* in your spreadsheet and describe its purpose.   [2]

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(c)   Describe **two** methods of *simplifying data entry* you used in your spreadsheet. Give a *different* benefit for **each** method.   [2×2]

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Turn over.

(d) Identify and describe the purpose or function of **two** other *different* advanced processes you used in your spreadsheet. [2×2]
Do not describe any formula, function or process used earlier in parts 10 *(a), (b)* or *(c)*

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