GCE AS/A level

1241/01

INFORMATION AND COMMUNICATION TECHNOLOGY – IT1

Information Systems

A.M. MONDAY, 2 June 2014

2 hour 15 minutes plus your additional time allowance

Surname _____

Other Names _____

Centre Number _____

Candidate Number 2 _____

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Question	**Maximum Mark**	**Mark Awarded**
1.	10	
2.	3	
3.	6	
4.	6	
5.	6	
6.	6	
7.	5	
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 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(b).

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

SECTION A

Answer ALL questions.

1(a) Define the terms INFORMATION and KNOWLEDGE and then give TWO different examples to illustrate the relationship between information and knowledge. [6]

1(b) Other than by AIDING THE DECISION MAKING PROCESS, describe using appropriate examples, TWO ways in which good quality information can add value to an organisation. [4]

10

2. Define the term VALIDATION. Name and describe how ONE validation method is used in an on-line banking system. [3]

3

3. Organisations make extensive use of ICT. Other than the data itself, describe THREE factors affecting the efficiency of data processing systems. [6]

9

4. A company uses both CAD and CAM to develop and make a product.

(a) Describe, using a suitable example, the role of CAD and CAM in this process. [3]

4(b) Give TWO ADVANTAGES and ONE DISADVANTAGE that CAD gives the company. [3]

5. Hospitals make substantial use of data handling software. Describe the following features and explain how EACH benefits a hospital.

(i) Query [2]

(ii) Report [2]

5(iii) Import/Export **[2]**

6

6. People and organisations are very concerned about the increasing use of computers for criminal purposes. Name TWO Acts and for EACH describe a concern and how the legislation has been used to try and address it. [2 × 3]

15

7. State what is meant by the term EPOS, describe the process that takes place at the EPOS and give TWO benefits of EPOS for the CUSTOMER. [5]

5

8. The Health Service makes extensive use of EXPERT SYSTEMS, BLOOD TRACKING and BODY SCANNING in caring for patients.

(a) State the THREE main components of an expert system and describe the ADVANTAGES and DISADVANTAGES of using an expert system for patient care. [8]

8(b) Describe, using examples, how blood tracking and body scanning are used in patient care. Discuss the ADVANTAGES and DISADVANTAGES EACH of these methodologies has brought to patient care.

[10]

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SECTION B

Answer ALL questions.

9(a) Describe what is meant by SIMULATION MODELLING. [1]

9(b) Describe the advantages and disadvantages of using SIMULATION MODELLING in car crash analysis. [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 processes, functions/formulas can be found in your spreadsheet.
For example page 6 cell d4.

10(a) Describe the purpose or function of ONE formula from list A and TWO DIFFERENT formulas from list B, which you have used in your spreadsheet.

[6]

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

10(b) Describe TWO methods you used in your spreadsheet to try and ensure that incorrect data was not entered in your spreadsheet. [6]

10(c) Describe a SORT used in your spreadsheet and state why you required the data to be sorted. [2]

10(d) Describe an example of ABSOLUTE ADDRESSING you used in your spreadsheet and give the reason you used it. [2]

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END OF PAPER

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