

Candidate Name	Centre Number	Candidate Number
		2



**GCE AS/A level**

1241/01

**New AS**

**INFORMATION AND  
COMMUNICATION TECHNOLOGY**

**ICT 1**

**INFORMATION SYSTEMS**

A.M. FRIDAY, 15 May 2009

2¼ hours

**INSTRUCTIONS TO CANDIDATES**

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, 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.

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

**SECTION A**

*Answer all questions.*

- 1. Define the terms Data, Information and Knowledge. Use an appropriate example to demonstrate the relationship between each of the terms. [6]

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- 2. (a) “Up to date, accurate and complete” information adds value to an organisation by aiding decision making. Describe using suitable *distinct* examples **two** other ways such information adds value. [4]

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(b) There are costs involved with getting good quality information including:

- money
- time
- human resources.

Describe with suitable *distinct* examples how such costs could arise.

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3. A student wishes to find out about the *Environment*. Describe how the student could make use of **two** different, appropriate *electronic* sources of information to find out about the *Environment*. [4]

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4. An Estate Agent uses *presentation* software in the running of the business.

(a) Describe, using an appropriate example in **each** case, how the following features can be used in the running of the Estate Agent's business.

(i) Animated transitions [2]

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(ii) Templates [2]

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(iii) Hyperlinks [2]

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(b) The Estate Agent also maintains a website. Discuss the advantages of using HTML coding rather than templates. [2]

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5. Electronic mail has become very important in the modern world. Explain the advantages and disadvantages of using email for communication. [5]

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6. Employees in an Architects office use computers to produce their designs.  
(a) Describe **three** health hazards that employees working with computers need to be aware of. [3]

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(b) Describe **three** different actions the company should take to minimise these risks. [3]

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7. When creating online bank accounts, *verification* and *validation* procedures are used.

(a) Define the term *verification* and describe using a suitable example, a method that would be used with online banking. [3]

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(b) Define the term *validation* and describe, using a suitable example, a method that would be used with online banking. [3]

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8. ICT is widely used in many areas of the Health Service such as expert systems, body scanning devices, databases for record keeping and bar coding.

(a) Define the term ‘expert system’ and describe using suitable examples their advantages for patient care. [8]

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(b) Discuss in detail the main benefits and drawbacks of such body scanning devices in the treatment of patients. [4]

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(c) Discuss the reasons why databases were introduced for storing patient records and assess the impact they have had upon patient tracking and monitoring. [6]

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**SECTION B**

*Answer all questions.*

9. Simulation modelling has become very important in today's society.

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

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(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.**

**IN YOUR ANSWERS YOU MUST IDENTIFY WHERE YOU HAVE USED  
THE FORMULAS AND FEATURES.**

**10. (a)** Identify **two** different formulas from the following list you used in your spreadsheet:

SINGLE IF, MULTIPLE IF, DATE, ROUND, VLOOKUP.

Describe the purpose for which **each** was used in your spreadsheet. [4]

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**(b)** Describe **one** method of simplifying *data entry* you created in your spreadsheet stating the advantages of using this technique for entering data into a spreadsheet. [4]

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(c) Describe **one** method of *validation error trapping* used in your spreadsheet, and describe the error message produced. [4]

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(d) Describe the purpose or function of a sort routine and of **one** other *different process* you used in your spreadsheet. [4]  
*In your answer do not describe any feature you gave in parts (a), (b) or (c).*

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