



**GCE AS/A level**

407/01

**INFORMATION AND  
COMMUNICATION TECHNOLOGY  
ICT1  
INFORMATION SYSTEMS**

P.M. MONDAY, 12 January 2009

1½ hours

**ADDITIONAL MATERIALS**

In addition to this examination paper, you will need an 8 page answer book.

**INSTRUCTIONS TO CANDIDATES**

Answer **all** questions.

The intended marks for questions or parts of questions are given in brackets [ ]. You are advised to divide your time accordingly. The total number of marks available is 60.

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

**SECTION A**

*Answer all questions.*

1. (a) Define the term knowledge in terms of its relationship to information. Give an example to illustrate this definition. [3]  
(b) Give two reasons why data is encoded before being entered into a computer system. State a problem associated with encoding, illustrating your answer with an appropriate example. [4]
2. Good quality information is needed to make informed decisions. Describe **four** characteristics of good quality information. [4]
3. The quality of the data input can often be improved by the use of validation techniques. Describe **three** distinct types of validation technique that can be used and explain, using examples, the type of error each technique is designed to prevent. [6]
4. Database programs are often used for stock control.  
(a) Some of the functions of the programs are mentioned below. State the purpose of each function and give an appropriate example of its use.
  - (i) query,
  - (ii) report,
  - (iii) import/export.  
(b) Flat file databases are now less widely used. Give **two** advantages of relational databases over flat files. [8]
5. Describe the important factors which must be taken into account when designing efficient data processing systems. [5]
6. “ICT has given criminals new tools to commit crimes.” Describe **three** forms of computer crime that illustrate this statement. [6]
7. Both LANs and WANs are widely used in health care. Using suitable examples describe the impact these different types of networks are having upon working practices in the Health Service. [6]

**SECTION B**

*Answer **all** parts of this question.*

**8.** ICT has had a big impact in the home.

(a) Illustrating your answer with suitable examples, discuss both the benefits and drawbacks of the impact of ICT on '*home entertainment*'. [10]

(b) Discuss the impact of '*home banking*'. In your answer, describe the advantages that it has brought the householder, the facilities offered and the effects on bank workers. [6]

*Quality of Written Communication.* [2]