GCE AS/A level

407/01

INFORMATION AND COMMUNICATION TECHNOLOGY
ICT1
INFORMATION SYSTEMS

A.M. FRIDAY, 16 May 2008

$1\frac{1}{2}$ 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. Define the terms *information* and *knowledge* and describe, using a suitable **example**, the relationship between them. [4]

2. *(a)* There are financial costs involved in getting good quality information. State **two** other costs and, giving a different example for **each** one, show how these costs arise. [4]

   (b) Give an example of a problem that could arise if information is not: [2]

   (i) complete,

   (ii) up to date.

   Use distinctly different examples in **each** case.

3. Good quality information must use accurate and valid data.

   (a) Define the term accurate data. [1]

   (b) Data may pass a validity check but still be inaccurate. Using a suitable example, explain the difference between validity and accuracy. [2]

   (c) In addition to being accurate, complete, up to date and valid, outline two other factors which would give good quality information. [2]

   (d) Describe, using an example, one way in which good quality information can add value to an organisation, other than by aiding the decision making process. [2]

4. A lecturer is preparing a new course and needs to find information on Brazil. One method of finding such information is to use reference books.
   Name **two** different electronic methods of finding this information and for **each** give **one** advantage of using the method over using a reference book. [4]

5. ICT is widely used in medicine.

   (a) Medical analysts use spreadsheet software to process patient data. Define **each** of the following features of the spreadsheet and give an appropriate example of how **each** can be used in processing patient data:

   (i)   Graphs;   [2]

   (ii) Templates.   [2]

   (b) Describe how the following are used for patient care in medicine:

   (i)   Bar code systems;   [2]

   (ii) Computer control systems.   [2]

6. A building company uses specialist CAD software on powerful stand alone computers.

   (a) Select any **two** of the following features of a CAD package, give a definition of the feature and describe an advantage of **each** feature to an architect when designing a new house.

   Hatching/rendering,   *stress/strain,*   *walkthrough.*   [2 × 2]

   (b) With reference to appropriate examples, give **three** benefits that networking would give the building company.   [3]

7. In response to the concerns of businesses and individuals about the use of computers for criminal purposes, the Government has introduced legislation such as the Computer Misuse Act, The Copyright Act and the Data Protection Act. With reference to suitable examples, suggest how the *three Acts* have tried to alleviate these concerns.   [6]

Turn over.

SECTION B

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

8. A large supermarket company has shops distributed across the country and they make use of ICT in their computerised shopping systems.

(a) Describe how data is input, output and stored when using point of sale systems. [3]

(b) Describe the processes involved in automatic stock control. [3]

(c) Discuss the benefits to the:

(i) company of automatic stock control; [3 × 2]

(ii) customer of e-commerce systems. [2]

(d) Describe the potential disadvantages to the company of using computer based shopping systems. [2]

Quality of Written Communication [2]