

407/01

INFORMATION AND COMMUNICATION TECHNOLOGY

ICT1

INFORMATION SYSTEMS

A.M. TUESDAY, 22 May 2007

(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) Information is data which has been processed by the computer. Define the term *knowledge* and use a specific example to show how knowledge is derived from information. [3]
(b) Give **two** reasons why data is encoded and give an example of a possible problem with encoding data. [3]
2. (a) Discuss how “up to date, accurate and complete” information can add value to an organisation. [3]
(b) Getting good quality information costs money, time and human resources. Describe with suitable *distinct* examples how such costs could arise. [3]
3. (a) Errors in data can occur during *data collection*, *data entry* and *data processing*. Describe how **each** of these three types of error could occur. [3]
(b) The purpose of verification and validation is to minimise errors in data. Distinguish *between* verification and validation and give an example of a validation method. [3]
4. A design company uses word processing and DTP software to produce documents. Define **each** of the following functions of the software and give an appropriate example of how **each** could be used by the design company:
 - (a) templates;
 - (b) style sheets;
 - (c) mail merge. [6]
5. An organisation has decided that its ICT system needs upgrading and a network installed.
 - (a) With reference to appropriate examples, other than sharing peripherals and email, describe **three** benefits that networking would give the organisation in dealing with its administration needs. [3]
 - (b) The organisation also realises that it needs an Intranet. Define the term *Intranet* and describe **one** advantage to the organisation of having an Intranet. [2]

6. ICT has had a huge impact on lifestyles. Describe **three** ways in which ICT has had an impact on home entertainment and leisure, giving a different example in **each** case. [6]
7. Downtown College uses an ICT system to store details on staff and students and to manage its finances.
- (a) Discuss in detail the *legal* requirements of storing personal data on this ICT system. [4]
- (b) Discuss the responsibilities on the staff and students in relation to maintaining the security of the ICT system. [3]

SECTION B

Answer all parts of this question.

8. ICT is widely used in the Health Service both for patient care and administration.
- (a) ICT is used in life support systems. Sensors are used to measure a number of different body functions such as temperature and heart rate. Identify *other* body functions which are measured by sensors and discuss the benefits to a hospital of using such sensors in life support systems. [5]
 - (b) ICT is also used to deal with blood bar coding. Discuss how the blood bar coding system is used and give **two** advantages of this system. [3]
 - (c) Name the **two** main *body scanning* devices used by hospitals to aid diagnosis. Discuss in detail, using an appropriate example, the main benefit of such body scanning devices. [4]
 - (d) Discuss the future developments that are likely to be seen in the use of ICT in the Health Service. [4]
- Quality of Written Communication* [2]