

417/01

**INFORMATION AND COMMUNICATION TECHNOLOGY**

**ICT4**

**USE AND IMPACT OF ICT**

A.M. TUESDAY, 20 June 2006

(1½ hours)

**ADDITIONAL MATERIALS**

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

**INSTRUCTIONS TO CANDIDATES**

Answer **all** questions in Section A and **one** question in Section B.

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. The Human Computer Interface is an important part of an ICT system. Name **four** factors which must be taken into account when designing a good user interface. Explain why **each** factor is important. 4 × [2]
  
2. A pet shop wishes to offer customers an interactive on-line shopping service.
  - (a) Other than hardware, discuss in suitable detail, **four** requirements needed to implement such an interactive on-line shopping service. [4]
  - (b)
    - (i) Give **two** advantages to the *customer* of on-line shopping. [2]
    - (ii) Give **two** advantages to the *business* of on-line shopping. [2]
    - (iii) Describe **two** possible problems when shopping on-line. [2]
  
3. (a) Other than cost or security issues, explain in detail **two** factors that could influence the choice of a computer network for a company. 2 × [2]  
(b) Two types of network that could be used are *peer to peer* and *client server*. Compare and contrast these **two** types of network. [4]
  
4. Other than crime, discuss in detail **four** of the major moral, social or ethical issues associated with the *Internet*. Use distinctly different examples in **each** case. 4 × [2]
  
5. The IT section in a college has decided to introduce a code of conduct for all its IT users. Discuss **three** problems which might have prompted this decision and suggest suitable guidelines which could be included in the code of conduct, to avoid such problems in the future. 3 × [2]

## SECTION B

Answer **either** question 6 or question 7.

6. Most organisations now have ICT security policies.

(a) Discuss in detail the potential threats to data and the possible consequences of accidental or deliberate destruction of data. Illustrate your answer with distinctly different examples in **each** case. [10]

(b) Discuss **four** methods which could be used to prevent the deliberate destruction or misuse of data.  $4 \times [2]$

*Quality of Written Communication* [2]

7. (a) A hospital uses a relational database management system for storing patient records. Staff and patients are allocated to wards.

(i) Explain what is meant by a relational database. [2]

(ii) One table in this database could be

WARD (WardId, NumofBeds, *StaffId* )

with WardId being the primary key and *StaffId* the foreign key.

Give **two** other suitable tables you could expect to see in this database, identifying any primary or foreign keys. [6]

(iii) Explain why relational databases are more secure than a flat file approach for storing patient records. [2]

(b) Hospitals use distributed medical databases. Describe the problems that could arise when using such distributed medical databases. [4]

(c) The use of video conferencing has now become important in the Health Service. With reference to appropriate examples, discuss **two** uses of video conferencing in the Health Service. [4]

*Quality of Written Communication* [2]