



GCE A level

1243/01

**INFORMATION AND
COMMUNICATION TECHNOLOGY**

IT3

USE AND IMPACT OF ICT

P.M. TUESDAY, 12 June 2012

2½ hours plus your additional time allowance

ADDITIONAL MATERIALS

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

INSTRUCTIONS TO CANDIDATES

Use black ink or black ball-point pen or your usual method.

Answer ALL questions in Section A and ONE question group in Section B.

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 90.

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 14.

SECTION A

Answer ALL questions.

- 1. Discuss the different needs of a novice and an expert computer user, and describe how they could be met when designing a suitable HUMAN COMPUTER INTERFACE (HCI). [5]**
- 2. Discuss the needs of a disabled computer user and describe how they can be met when designing a suitable HUMAN COMPUTER INTERFACE (HCI). [4]**
- 3. Describe what is meant by the term NETWORK TOPOLOGY. [2]**
- 4. Other than TOPOLOGY or COST, explain in detail THREE other factors which influence the choice of a network. [6]**
- 5. PEER-TO-PEER and CLIENT SERVER networks are two types of network. Compare and contrast these two types of network. [6]**
- 6. Organisations are often concerned that some of their employees misuse their facilities. Describe THREE distinct ways that an employee can misuse ICT facilities. [3]**

- 7. Most organisations now have a code of conduct to discourage their employees from misusing the ICT facilities.
Describe FOUR distinct guidelines a code of conduct should contain. [4]**
- 8. A shop selling memorabilia already has a website and computer systems. The shop owner wants to expand and offer the customers an on-line shopping service.
Describe in detail FOUR main requirements needed for an efficient on-line shopping service. [4]**
- 9. Discuss the advantages and disadvantages of on-line shopping to both the BUSINESS and the CUSTOMER. [7]**
- 10. Parents are concerned about the lack of control of the Internet. Discuss, using suitable examples, their likely concerns. [8]**
- 11. A Bank is very dependent on its ICT system for its administration. The Bank is undertaking a RISK ANALYSIS.
Describe in detail TWO of the factors the bank should take into account when deciding how much to spend to control and minimise the risk to data. 2 x [2]**

- 12. A bank uses File Transfer Protocol (FTP). Describe in detail what is meant by FTP, state a use and give an advantage to the bank of using FTP. [4]**
- 13. A systems analyst is called in to give advice after a new ICT system is implemented. Describe, using examples, FOUR MAINTENANCE ISSUES that could have arisen. [8]**
- 14. Many organisations now depend on their Management Information System (MIS) for the success of their businesses. Discuss using appropriate examples FOUR of the features of an effective MIS system. [8]**

SECTION B

Answer EITHER questions 15, 16, 17 and 18 OR Questions 19 and 20.

15. Explain what is meant by a relational database. [2]

16. A DVD Rental Company uses a relational database management system for organising its lending. For simplicity, a borrower may only loan one DVD at a time.

Part of one table in the DVD Rental Company database could be:

BORROWER [BorrowerID, FirstName, Surname, Borrower Type, Address1,]

with BorrowerID being the primary key.

Give TWO other suitable tables you could expect to see in this database, identifying any primary and foreign keys. [7]

17. Relational databases are normalised to work effectively. Explain what is meant by the term DATA NORMALISATION. [2]

18. Some companies now use DISTRIBUTED DATABASES. Explain what is meant by the term DISTRIBUTED DATABASES and explain their advantages and disadvantages. [6]

19. With the increase in the use of computing systems most organisations have adopted ICT security policies.

Discuss in detail THREE DIFFERENT types of potential threats to data. For each type of threat, describe the possible consequences of the destruction of data. You need to use DISTINCTLY different examples to illustrate your threats. [9]

20. Discuss FOUR possible operational procedures for preventing misuse of data. Use distinct examples to illustrate your procedures. [8]