

General Certificate of Education
January 2003
Advanced Subsidiary Examination



INFORMATION AND COMMUNICATION TECHNOLOGY ICT2
Unit 2 Information: Management and Manipulation

Tuesday 14 January 2003 Afternoon Session

In addition to this paper you will require:
a 12-page answer book.

Time allowed: 1 hour 30 minutes

Instructions

- Use a blue or black ink or ball-point pen. Use pencil only for drawing.
- Write the information required on the front of your answer book. The *Examining Body* for this paper is AQA. The *Paper Reference* is ICT2.
- Answer **all** questions.

Information

- The maximum mark for this paper is 60.
- Mark allocations are shown in brackets.
- The use of brand names in your answers will **not** gain credit.
- You are reminded of the need for good English and clear presentation in your answers.

Answer **all** questions.

1 State **three** ways of entering text into a document when using a word processor. (3 marks)

2 What type of software would normally be used for the following tasks?

(a) Creating a directory, or folder, on a computer (1 mark)

(b) Writing a book (1 mark)

(c) Viewing a website (1 mark)

(d) Querying a large set of records (1 mark)

(e) Keeping financial records (1 mark)

*(The use of brand names will **not** gain credit.)*

3 A scanner is to be purchased for use with a personal computer.

(a) State **one** item of software that should be supplied with the scanner, and state why it is needed. (2 marks)

(b) A map has been scanned and its image saved in a file.

State **three** ways in which the image of the map could be manipulated before it is printed. (3 marks)

*(The use of brand names will **not** gain credit.)*

4 Items stored in a computerised stock control system are uniquely identified by a product code. The format of the product code is XX9999, where:

X - Capital letter (A, B or C)

9 - Digit

The product code has a range from AA1000 to CC9999.

Name and describe **three** validation checks that could be used on this product code. (6 marks)

5 The term used to describe the arrangement of computers in a network is topology.

(a) Name, and draw diagrams to illustrate, **two** different Local Area Network (LAN) topologies. (4 marks)

(b) State **one** different advantage for **each** topology that you have chosen. (2 marks)

- 6 A company is replacing the personal computers used by its employees. The staff have been offered the choice of a desktop personal computer, or a laptop computer.

Describe **one** advantage, and **one** disadvantage, to the staff of these options. Your advantages and disadvantages must be different in each case.

- (a) A desktop personal computer *(4 marks)*
- (b) A laptop computer *(4 marks)*

- 7 Describe, with the aid of examples, **three** ways in which the interface between a computer and a human can be designed to provide an effective dialogue. *(9 marks)*

- 8 An international airport is open 24 hours every day of the year. Its computer-based flight information system for arrivals and departures is essential to the smooth running of the airport.

Describe **four** factors that the airport must consider when designing backup and recovery procedures for this system. *(8 marks)*

- 9 A human resources department stores details of staff in two flat files. One file is used to keep the staff details, and the other file is used to keep records of training undertaken by members of staff. The file structures are as shown below.

Staff File

(Staff-number, Forename, Surname, Address, Home-phone-no, Start-date, Department, Extension-no)

Training File

(Staff-number, Forename, Surname, Department, Training-course, Training-date)

Underlined fields are key fields in each file.

- (a) Describe, using examples from the above two files, **two** problems of these file structures. *(6 marks)*
- (b) Design an efficient database structure for the above data. *(4 marks)*

END OF QUESTIONS