

General Certificate of Education
June 2007
Advanced Subsidiary Examination



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

Tuesday 22 May 2007 9.00 am to 10.30 am

For this paper you must have:

- a 12 page answer book.

Time allowed: 1 hour 30 minutes

Instructions

- Use blue or black ink or ball-point pen.
- 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.
- Do all rough work in your answer book. Cross through any work you do not want to be marked.

Information

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

Answer **all** questions.

- 1 When a picture is scanned the scanning software encodes the image, and the result is then stored for future use.

Name **two** formats that can be used to store the encoded image.

(One word answers are acceptable for this question.)

(2 marks)

- 2 Name a method of data capture, other than the use of a keyboard, that would be suitable for capturing the following data:

(a) marks from multiple choice examination answer sheets

(1 mark)

(b) details from bank cheques

(1 mark)

(c) details of library book loans and returns.

(1 mark)

- 3 An applications package has macro capabilities.

Describe what is meant by the term *macro*, and give an example of where the use of a macro would be appropriate.

(4 marks)

- 4 A large company that sells books over the Internet has decided to change the software it uses to process its customers' orders.

(a) Explain possible technical implications of changing the software.

(4 marks)

(b) Explain possible human implications of changing the software.

(4 marks)

- 5 The ICT manager of a large hospital is reviewing its backup and recovery systems for patients' records.

(a) Describe **four** factors that the manager must consider when designing backup procedures for this system.

(8 marks)

(b) State **two** factors that the manager must consider when designing recovery procedures for this system.

(2 marks)

6 Most personal computers make use of a Graphical User Interface (GUI).

State **four** features of a GUI, giving a benefit of using each feature. (8 marks)

7 A company that sells toys by mail order uses data entry clerks to enter the order details into its ICT system. The data comes from order forms that have been received by post. The order details are always validated and may be verified.

Some of the following details from the order forms are entered by the clerks, and others appear automatically, in the fields below.

Title

Surname

HouseNumber/Name

Postcode

ToyCode

ToyDescription

ToyPrice

Quantity

- (a) Describe what is meant by the terms *verification* and *validation*. (3 marks)
- (b) Explain how data entered into the field 'Quantity' could be validated. (2 marks)
- (c) Explain why data entered into the field 'Surname' should be verified. (2 marks)
- (d) Name **two** fields where a drop down list would be appropriate for the clerks to choose the data to be entered, and explain why. (3 marks)
- (e) (i) Name a field where data entered by the clerk could trigger the automatic entry of data into two other fields. (1 mark)
- (ii) Name **two** fields where the data would then appear automatically. (2 marks)
- (iii) Give **two** benefits of automatic data entry. (2 marks)

Turn over for the next question

- 8 A small company that makes items of furniture keeps records of its customers and their purchases in a relational database. At the end of a month, bills are sent to those customers that have been supplied with items of furniture.

Examples from tables in the relational database are shown below.

Customer Table

Company	Building	Town	Postcode	Account Number
Smith & Co.	9 High Street	Rushworth	RH1 2PV	257
Patel & Son	19 Main Road	Stainford	SN1 5ST	492
MacKay Furniture	6 Broad Street	Gifford	GD2 2XR	645

Purchase Table

Account Number	Date	Purchase	Amount
645	16/4/2007	Table	£600.00
492	16/4/2007	Coffee Table	£250.00
257	17/4/2007	4 Dining Chairs	£600.00
257	20/4/2007	Table	£400.00
645	21/4/2007	Rocking Chair	£200.00
257	22/4/2007	Sideboard	£750.00

- (a) Explain why it is more efficient to store the data in two tables, rather than using a single table. *(2 marks)*
- (b) How is the data related between the tables? *(2 marks)*
- (c) The database management system's report generator uses the two tables to produce the monthly bills that are sent to customers.

Draw a draft design for a monthly bill, using the entries for Smith & Co. to illustrate the layout and contents of the report. *(6 marks)*

END OF QUESTIONS