General Certificate of Education
June 2002
Advanced Level Examination

AQA

ASSESSMENT and
QUALIFICATIONS
ALLIANCE

**INFORMATION AND COMMUNICATION TECHNOLOGY      ICT4**
**Unit 4 Information Systems within Organisations**

Monday 17 June 2002        Morning Session

**In addition to this paper you will require:**
  a 16-page answer book.

Time allowed: 2 hours

**Instructions**
- Use blue or black ink, or a  blue or black ball-point pen.  Pencil should only be used 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 ICT4.
- Answer **all** questions.

**Information**
- The maximum mark for this paper is 90.
- Mark allocations are shown in brackets.
- You are reminded of the need for good English and clear presentation in your answers.  Question 9 should be
  answered in continuous prose.  Quality of language will be assessed in this answer.

Answer **all** questions

1 Describe, with the aid of an example, the meaning of *formal information flow* within an organisation.

*(3 marks)*

2 A company which distributes car parts has recently expanded and wants to commission a new corporate information system. It needs the system to be successful to ensure the future growth of the business.

State **five** factors that could cause the failure of such an information system. *(5 marks)*

3 New employees joining a company are each asked to sign an agreement to adhere to a code of practice for using the organisation's computer system.

Explain **four** issues that such a code of practice should address. *(8 marks)*

4 A Medical Practice has installed a new information system that links patient records and prescriptions to the financial systems of the practice. The financial records must be secure against fraud as they are used to claim money from the Health Authority.

(a) Describe **four** factors that should be included in an IT security policy for the practice. *(8 marks)*

(b) Describe **one** measure the practice could take to show that their records were accurate. *(2 marks)*

(c) Describe **three** criteria that could be used to select a disaster contingency plan to recover from a breakdown of this system. *(6 marks)*

5 Many commercial organisations already operate using computer-based information systems, yet they often introduce new systems or replace current ones.

(a) State **three** reasons why a feasibility study might recommend the replacement or updating of an existing information system. *(3 marks)*

(b) Describe **three** factors that should be considered when discussing the introduction of a new information system. *(6 marks)*

**6** A company keeps records of its sales and uses a Management Information System to produce reports for its sales personnel and for its shareholders.

    (a) Describe **two** differences between the information needed by sales personnel in their day-to-day work, and by shareholders reading the annual report. *(4 marks)*

    (b) Describe, with the aid of an example, **one** characteristic of good quality information that might be produced by this system. *(3 marks)*

**7** A small legal firm is about to replace stand-alone computers with a new computer network. Industry standard software will be installed. As new users of both the equipment and the software, the firm is concerned about the levels of support and training that will be needed. There are three levels of system user: the solicitors themselves, the practice management and the administrative staff.

    (a) Explain **two** factors that need to be taken into account when planning the training. *(4 marks)*

    (b) Describe **two** different ways of giving technical support to these users. *(4 marks)*

    (c) State **two** means of providing the training material, and give an advantage of each. *(4 marks)*

**8** A large chain of supermarkets makes use of data processing systems and information systems.

    (a) With the use of suitable examples, identify the difference between a *data processing system* and an *information system*. *(4 marks)*

    (b) Describe, with an example of each, the role of an information system in decision making for the following levels of supermarket management:

       (i) tactical;
      (ii) strategic. *(4 marks)*

    (c) Give an example of how a data processing operation in a supermarket might provide data for a company-wide information system. *(2 marks)*

**Turn over ▶**

**9**  New information and communication technologies are frequently introduced into companies as a result of outdated existing systems, market pressure, new legislation and other factors.  Companies have to adapt quickly, or face going out of business.

Discuss the factors that need to be considered to manage such changes successfully within an organisation.  Particular attention should be given to:

- organisation structure and information needs;
- management and staffing issues;
- internal procedures, external procedures and the customer interface.

Illustrate your answer with specific examples.

*The quality of written communication will be assessed in your answer*.                    *(20 marks)*

## END  OF  QUESTIONS