AQA

ASSESSMENT and
QUALIFICATIONS
ALLIANCE

INFORMATION AND COMMUNICATION TECHNOLOGY   ICT5
Unit 5 Information: Policy, Strategy and Systems

Friday 25 June 2004   9.00am to 11.00am

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

Time allowed: 2 hours

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 ICT5.
- Answer **all** questions.

Information
- The maximum mark for this paper is 90.
- 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. Question 9 should be answered in continuous prose. The Quality of Written Communication will be assessed in this answer.

Answer **all** questions.
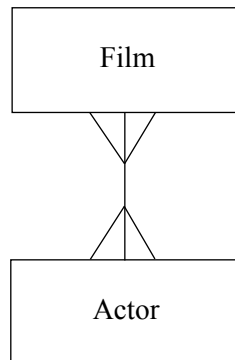
1 Figure 1 is an entity-relationship diagram.

Figure 1

Name and describe the relationship between Film and Actor as shown in the above diagram. *(3 marks)*

2 Explain why a Uniform Resource Locator is used to provide access to specific systems over the Internet.
(3 marks)

3 The testing of software is an essential aspect in the overall provision of solutions.

(a) Describe **two** reasons why a test plan is important. *(4 marks)*

(b) Describe **one** reason why alpha testing is important. *(2 marks)*

(c) Describe **one** reason why beta testing is important. *(2 marks)*

4 One method of providing a Human/Computer Interface (HCI) is to make extensive use of menus. An example of where menus are used in this way is with mobile telephones.

(a) Name **one** other situation where menus are used as the main feature of an HCI. *(1 mark)*

(b) Describe **four** reasons why menus are appropriate in situations such as these. *(8 marks)*

5 A toy manufacturing company wishes to purchase a new system for maintaining stock data. When a consultant is appointed, the first step she takes is to set up a meeting with the relevant departmental managers of the company.

    (a) Describe **one** reason for this meeting, in addition to establishing an agreed set of evaluation criteria.
(2 marks)

    (b) One of the evaluation criteria decided upon at this meeting is "cost/benefit", as the company needs to be able to show that the new system will have been a good investment within twelve months of its implementation.

        Describe **three** other possible criteria, saying why each is appropriate in this situation. *(9 marks)*

6 There are many different options when providing software solutions to specialist problems.

    (a) Describe **one** advantage and **one** limitation of purchasing "off-the-shelf" packages. *(4 marks)*

    (b) Describe **one** advantage and **one** limitation of leasing software licences. *(4 marks)*

    (c) Describe **one** advantage and **one** limitation of using an in-house development team to create bespoke solutions. *(4 marks)*

    (d) Describe **one** advantage and **one** limitation of using an external software house to create bespoke solutions. *(4 marks)*

7 When designing computer systems, it is important to consider how interaction with a human will take place.

    Describe, with the aid of examples, **three** factors that need to be addressed when considering Human/Computer Interaction. *(9 marks)*

TURN OVER FOR THE NEXT QUESTION

Turn over ▶

8 A computer repair service uses different information systems to keep records of clients, current jobs and parts held in stock. These are accessible from a number of workstations, on a Local Area Network, which are used by several employees.

   (a) Describe **four** factors that need to be addressed in forming a suitable backup strategy that the company can use. *(8 marks)*

   (b) The manager of the company feels that some of his employees are misusing the network facilities, as he has noticed an increase in the use of printer consumables.

      Explain **one** method the manager can use to monitor and control the usage of the printers on the network. *(3 marks)*

9 A large company has many retail outlets around the United Kingdom selling consumer electronic devices such as televisions, audio equipment and personal digital assistants. The current stock control system is now inadequate for the company's business needs.

An important decision for the company to make is how to implement its new stock control system. It is essential that each outlet will have access to the stock control data of all the other outlets. Each outlet must also have control over its own stock.

Discuss how this company might implement a stock control database system with the above features.

Include in your discussion consideration of the following issues:

- resource requirements;
- management of the data;
- management of the system.

The Quality of Written Communication will be assessed in your answer.

(20 marks)

END OF QUESTIONS