

General Certificate of Education
June 2008
Advanced Level Examination



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

Friday 13 June 2008 1.30 pm to 3.30 pm

For this paper you must have:

- a 16-page answer book.

Time allowed: 2 hours

Instructions

- Use black ink or black 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.
- Do all rough work in the answer book. Cross through any work you do not want to be marked.

Information

- The maximum mark for this paper is 90.
- The marks for questions are shown in brackets.
- The use of brand names in your answers will **not** gain credit.
- Question 10 should be answered in continuous prose. In this question you will be marked on your ability to use good English, to organise information clearly and to use specialist vocabulary where appropriate.

Answer **all** questions.

- 1 State **three** ways of providing a software solution to a specialist task. (3 marks)
- 2 With reference to database management software, explain what is meant by the following terms:
 - (a) data consistency; (2 marks)
 - (b) data integrity; (2 marks)
 - (c) data redundancy; (2 marks)
 - (d) data independence. (2 marks)
- 3 Describe the concept of a client-server database. (4 marks)
- 4
 - (a) Explain what is meant by the terms *alpha testing* and *beta testing*. (4 marks)
 - (b) Name **two** types of maintenance, and explain why each may be necessary. (6 marks)
- 5 Name **two** system resources and, for each one, state why a sophisticated Human-Computer Interface (HCI) makes high demands on it. (4 marks)
- 6 A bookseller wishes to evaluate a new software package for selling online.
Explain why the bookseller might need to establish the following evaluation criteria:
 - (a) functionality; (2 marks)
 - (b) usability; (2 marks)
 - (c) performance; (2 marks)
 - (d) robustness; (2 marks)
 - (e) portability. (2 marks)

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- 7 (a) Give **two** ways by which data can be transferred successfully between different software applications on the same computer system. (2 marks)
- (b) Give **two** ways by which data can be transferred successfully between different computer systems. (2 marks)
- 8 (a) State **four** methods of protecting the security of a computer network and, for each one, describe how it protects the network. (8 marks)
- (b) A network service may be improved through the use of network audit software.
- (i) Explain why network audit software is used. (3 marks)
- (ii) Give **four** items of data that may be recorded by the network audit software. (4 marks)
- 9 The designers of a word processing software package must consider the psychological factors that affect the way in which the user will interact with the software.
- State **four** psychological factors the designers should consider and, for each one, use an example to explain how this factor could be considered in the design of the word processing software. (12 marks)
- 10 An organisation needs to consider the strategic implications of software, hardware, configuration and backup options.
- Discuss this statement, paying particular attention to:
- the range of needs of different users within the organisation
 - the need for software and hardware upgrades
 - backup systems.
- The quality of written communication will be assessed in your answer.* (20 marks)

END OF QUESTIONS

There are no questions printed on this page