

THE BRITISH COMPUTER SOCIETY

THE BCS PROFESSIONAL EXAMINATION

Diploma

PROFESSIONAL ISSUES IN INFORMATION SYSTEMS PRACTICE

12th October 2004, 10.00 a.m.-12.00 p.m.

Answer FOUR questions out of SIX. All questions carry equal marks.

Time: TWO hours.

*The marks given in brackets are **indicative** of the weight given to each part of the question.*

1.
 - a) Provide a brief explanation of the BCS Industry Structure Model (ISM). **(8 marks)**
 - b) The BCS Industry Structure Model (ISM) recognises ten Levels. The top two Levels are combined. Level 0 is the lowest and Level 8/9 is the highest. What is the concept behind these Levels? **(10 marks)**
 - c) What makes the latest version of the BCS Industry Structure Model (ISM) – ISM 3.3 - flexible and easy to use? **(7 marks)**

2.
 - a) Briefly explain how the UK Regulation of Investigatory Powers Act 2000 relates to the management of a company's computer systems. **(8 marks)**
 - b) Briefly outline how the UK Disability Discrimination Act 1995 might relate to an organisation's website. **(9 marks)**
 - c) Explain the difference between opting-in and opting-out in terms of email marketing with regard to an organisation's website. **(8 marks)**

3.
 - a) Describe FIVE roles and/or responsibilities of British Computer Society as a professional body. **(15 marks)**
 - b) Compare and contrast the licensing of software engineers to practice in the UK compared with:
 - i) other UK professionals **(5 marks)**
 - ii) software engineers elsewhere in the world **(5 marks)**

4.
 - a) Explain, with suitable examples, what is meant by saying that an organization has a functional structure and contrast this with a geographical structure. **(10 marks)**
 - b) What are the advantages and disadvantages of a functional structure? **(10 marks)**
 - c) Why in practice does a single company usually exhibit a mixture of different structures? **(5 marks)**

Turn over]

5. a) Explain the terms *fixed costs* and *variable costs*, using suitable examples to illustrate your explanation. **(8 marks)**

b) A company needs to buy a high throughput printer, which will be used to print some 3 million sheets per year. It has reduced the possibilities to two:

The Cambrian Superprint costs £10,000 and there is an annual maintenance charge of £6,000, irrespective of the number of pages printed. Toner cartridges cost £100 and one cartridge lasts for 100,000 sheets. The manufacturer quotes a lifetime of 9 million copies.

The Yorkshire Stamper costs £12,000. There is a maintenance charge of 0.3p per sheet printed, which covers all maintenance including replacement toner cartridges. The quoted lifetime is 12 million copies.

i) Calculate the total cost per sheet printed for each of the two printers and hence recommend which one should be purchased. **(12 marks)**

ii) Explain how the recommendation would be affected if the number of sheets printed per year were to increase? **(5 marks)**

[You should not try to take account of the time value of money in your calculations.]

6. A university provides internet services to its students, including allowing them to set up their own web sites.

It is concerned, however, that students might place damaging but false allegations about prominent people on their sites and that the university might be sued for substantial amounts of money.

a) Discuss the extent to which the university's worries are justified and suggest what it might do to minimize the risk. **(13 marks)**

b) Explain the meaning of the terms *balance sheet* and *profit and loss account*, and describe the relationships between them. **(12 marks)**