

# THE BRITISH COMPUTER SOCIETY

## THE BCS PROFESSIONAL EXAMINATIONS BCS Level 5 Diploma in IT

### PROFESSIONAL ISSUES IN INFORMATION SYSTEMS PRACTICE

24th April 2007, 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.*

Calculators are NOT allowed in this examination.
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1. a) Explain the THREE principles that are fundamental to the idea of a limited liability company. **(9 marks)**
- b) Setanta Software Ltd is a small but successful bespoke software company. It now wishes to set up a subsidiary, in the UK, to develop a pensions administration package. The UK government provides grants to encourage the growth of such companies in areas of high unemployment.

As managing director, you are responsible for raising the capital required to get the new subsidiary up and running. You have three sources of finance available, i.e.

- UK government grant
- loan
- sale of equity in Setanta Software.

Explain the characteristics of each of these possible sources and outline the issues to be considered in each case. **(16 marks)**

2. In the context of the UK computing profession:
- a) describe the situation regarding the professional status of software engineers;
- b) identify the principal professional bodies and describe their relationship to each other and to other international bodies;
- c) describe how computing-related university courses are accredited;
- d) describe *either* the BCS Industry Structure Model (ISM) *or* the SFIPlus model that has recently replaced it;
- e) identify FIVE responsibilities of the BCS. **(5 marks each)**

3. a) Briefly outline why the UK Freedom of Information Act 2000 was introduced, and explain the type of data that it covers. **(6 marks)**
- b) Assume that you are an IT manager in a UK hospital. You have been asked to prepare a presentation to staff within the hospital regarding the impact of the UK Freedom of Information Act 2000 upon health service provision. Outline the material you would include in your presentation, under the headings: obligation to publish, the public's right to ask for information, the circumstances in which a charge may be made and the circumstances under which the information may be withheld. **(19 marks)**

4. a) ToughAlloy is a large specialist steel producer. The company forges and rolls steel, and has large furnaces to heat the steel prior to rolling or forging. It has commissioned the company you work for, Real Software, to develop a real-time control system to monitor the steel in the furnace and manage the flow of items in and around the furnace. This project is important to your company and the scheduled finish will be difficult to meet. However you have spotted that there is an error in the design of the flow algorithm that you suspect would cause a problem with the processing of the metal. When you mention this to your project manager in Real Software he tells you that it is not your problem and to ignore it.

Discuss the ethical issues involved in this situation, showing how the British Computer Society's Code of Conduct might apply to your action. **(10 marks)**

- b) You have just joined Medico, a company that specialises in hospital technology. Following a visit to a large hospital by the sales manager, he has identified an opportunity to sell a new product to this client based upon a system you created for your previous employer, HealthSys. To create this product he has asked you to use your password, which has not yet been removed, to access the HealthSys network to obtain the technical design and create a fresh product with different program code and user interface.

Discuss the ethical and legal issues involved in this situation, showing how the British Computer Society's Code of Conduct, and UK employment and computer law might apply to your action. **(15 marks)**

5. a) Outline the difference between opting-in and opting-out in terms of e-mail marketing by an e-business website. **(6 marks)**
- b) Explain why it is necessary to display terms and conditions of purchase on an e-business website. **(6 marks)**
- c) Discuss why it is necessary to have a disclaimer on an e-business website to inform users that the website uses cookies. **(6 marks)**
- d) What legal remedies does an e-business have if someone hacks into its site and makes alterations to it? **(7 marks)**

6. a) Explain what is meant by the terms *recruitment* and *selection*. **(4 marks)**
- b) Describe briefly FOUR ways in which selection may be carried out. **(8 marks)**
- c) Increasingly, recruitment is being outsourced to specialist agencies. Suggest reasons why this is happening and discuss the advantages and disadvantages of this from the point of view both of the job-seeker and the employer. **(13 marks)**