THE BRITISH COMPUTER SOCIETY

THE BCS PROFESSIONAL EXAMINATION
Diploma

PROFESSIONAL ISSUES IN INFORMATION SYSTEMS PRACTICE

8th May 2002, 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)* The Code of Conduct of the British Computer Society is divided into four main sections. Explain what these sections are and describe briefly the issues addressed by each section. **(16 marks)**

    b) You have recently taken over responsibility for the maintenance of your company's payroll suite. While familiarising yourself with it, you realise that the modules that calculate deductions contain a systematic error that will lead to senior staff in the company paying substantially less in social security contributions than they should. When you point this out to your manager, he tells you to leave it as it is, because this is part of the way the company rewards its senior staff.

    Which clauses in the Code of Conduct are relevant to this situation and how might the Code affect what you do? **(9 marks)**

2. *a)* Explain the purpose of the *balance sheet* and the *profit and loss account*, distinguishing carefully between them. **(8 marks)**

    b) At the start of its financial year, a company buys a file server for £20,000, expecting its useful life to be four years. The company uses straight line depreciation. Explain the effect that the file server will have on the balance sheet and profit and loss account for the next four years. **(8 marks)**

    c) What is the purpose of a cash flow statement and why is such a statement useful? **(4 marks)**

    d) Why does depreciation increase the apparent cash flow? **(5 marks)**

3. *a)* What are the eight data protection principles that the Data Protection Act 1984 established? **(16 marks)**

    b) The Institute of Laundry Engineers runs a system of examinations that allows practising laundry engineers to qualify as Chartered Laundry Engineers. In order to take the examinations, candidates must become student members of the Institute. Typically it takes three years to take and pass the complete set of examinations. It is also possible to qualify for chartered membership of the Institute by successfully completing an accredited degree course. The Institute holds records of student members' personal details and their performance on individual papers in the examinations in its membership computer system. For members who are admitted to chartered status by virtue of their degree, only the final degree result is held. Records are removed from the system only when the Institute is informed of a member or ex-member's death.

    Discuss the ways in which the Institute might be in breach of the Data Protection Act 1984. **(9 marks)**

4. Discuss the issues that the following scenarios raise.

a) Parsley is a company that produces accounting software. It is successful and its software is widely used. Nevertheless, it has a major weakness in that it doesn't detect file overflow; if file overflow occurs, transactions are lost without warning. Customers are told that they must check the size of certain files weekly. Peter was, until recently, head of quality control at Parsley and repeatedly drew attention to this problem. Nevertheless, management refused to allocate the fairly substantial resources necessary to rectify it.

Peter has now moved to Juniper, one of Parsley's competitors. Since then, Parsley's sales staff have noticed that, in sales situations where they are competing directly with Juniper, potential customers have been asking them how their software handles file overflow conditions. Under determined questioning, the sales staff have had to admit to the problem. As a result, they have lost a large number of sales to Juniper. Parsley now wishes to take action against Peter for breach of confidentiality. **(10 marks)**

b) Talybont Games Ltd is a small games developer, employing about 20 staff. It has developed a very successful game that is marketed by the games publisher MegaPastimes under the trademark Boglehunter. (Bogle is a Scots word for a ghost.)

A few months ago, Alice and Brian, two of the senior games designers at Talybont Interactions left the company to join Borth Simulators Ltd, a company specializing in the development of simulation games. Borth recently produced a game very similar to Boglehunter, which is marketed by another large games publisher Goldengames. It is sold under the name Boglecatcher at a price some 30% less than Boglehunter. Its packaging resembles that of Boglehunter to the extent that the colour schemes and type styles are similar. Both Talybont Games and MegaPastimes wish to take legal action against what they regard as piracy.
(15 marks)

5. *a)* Describe the responsibilities that are typically associated with professional institutions. **(6 marks)**

b) Explain the terms *reservation of title* and *reservation of function*. **(4 marks)**

c) Describe the structure of the engineering profession in the UK. **(10 marks)**

d) Do you think it would be either feasible or desirable to introduce reservation of title and/or reservation of function into the computing profession? Give your reasons. **(5 marks)**

6. Your organization has recently purchased a new system, which is to be installed at eight sites across the company. The roll-out of the new system involves the installation of a new server and its software, and installation of the client software and training of the affected staff at the eight sites. The training takes one day per site. The installation depends upon the size of the site, four sites will take three days per site and the other four will take two days per site. The training for each site cannot take place until the installation of the client software is complete at that site.

Before the roll-out can start, training documentation and a set of client installation procedures have to be written. The training documentation will need five person days and the installation procedures 10 person days. At the end of the roll-out, a review report is to be written; this is expected to take two days.

You are required to produce:

a) a work-breakdown structure; **(4 marks)**
b) an activity network diagram with the critical path marked; **(7 marks)**
c) a Gantt chart. **(7 marks)**

Following the production of the plan, you are informed that there are some constraints in the allocation of people to the tasks. Two people, Alan and Marie, have been allocated to the roll-out. Only Marie has the skills to produce the installation procedures and training documentation, and the project review will require both Alan and Marie to work on the task together. Using this information show the impact on the roll-out plan. **(7 marks)**