**THE BRITISH COMPUTER SOCIETY**

THE BCS PROFESSIONAL EXAMINATION
Diploma

**PROFESSIONAL ISSUES IN INFORMATION SYSTEMS PRACTICE**

24$^{th}$ April 2003, 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)*　Describe the origin of UK engineering bodies, the development of the current structure and how the BCS fits into the current structure.　　**(9 marks)**

　　*b)*　Describe the membership structure of the BCS as a 'professional engineering body'.　　**(6 marks)**

　　*c)*　Benyon-Davies is quoted in the September 1999 issue of *The Computer Bulletin* as saying that "information systems is currently at best a semi-profession."

　　　Discuss this statement by comparing the information systems development profession with other professions such as medicine and law.　　**(10 marks)**

2.　*a)*　Many organisations have IT security packages installed that control the security profiles of IT users within the organisation.  This typically includes access limitations on data and computer programs in terms of read, update and execute capabilities. In addition many organisations have procedures for checking that software originating outside the organisation is not contaminated by viruses.  Explain how these practices relate to the UK Computer Misuse Act 1990.　　**(9 marks)**

　　*b)*　Compare and contrast the protection offered to citizens and organisations respectively by the UK Data Protection Act 1998 and the UK Computer Misuse Act 1990.　　**(8 marks)**

　　*c)*　A medical centre has six PCs for use by doctors, and one PC for use by administrative staff for producing repeat prescriptions.  Due to an error in the software used, the medication for two different patients attending the medical centre is mixed up, and the patients are given the wrong prescriptions.  One evening the medical centre is broken into and one of the PCs containing patient details is stolen.

　　　Explain how the Data Protection Act 1998 relates to this scenario.　　**(8 marks)**

3.　*a)*　Explain what is meant by the terms *working capital* and *cash flow*.　　**(5 marks)**

　　*b)*　Three people who recently completed the BCS Diploma successfully have established a small company to set up web sites for third parties and, if required, to host the web site on a computer in their office.

　　　They have already won one significant contract that will provide them with about three months work and they have a number of other promising sales leads.

　　　*i)*　Making reasonable assumptions, which should be stated, about the costs and revenues involved, produce a cash flow forecast for the first six months of operation.　　**(15 marks)**

　　　*ii)*　Explain how you would use this forecast to estimate the amount of working capital required.

　　　　**(5 marks)**

**Turn over]**

**4.** *a)* IT project management can involve the selection of appropriate staff to undertake a particular IT project. Discuss the range of skills that would be required by a team of IT staff to undertake the development of an e-commerce system that would link to an organisation's existing stock control, sales order processing and accounting systems. **(12 marks)**

*b)* Having chosen a team of IT staff to undertake the development of the e-commerce system, explain how you would plan the project activities, assign staff to the project activities and monitor the progress of the project. **(13 marks)**

**5.** *a)* Explain the following terms:

- *sole trader*

- *partnership*

- *company*. **(12 marks)**

*b)* Shareholders of a company have *limited liability*. Explain this term and contrast it with the liability of sole traders and partners. **(7 marks)**

*c)* Two existing firms can join together in two different ways. One firm may make a *takeover bid* for the other, or a *merger* may occur.

Contrast a takeover bid with a merger. **(6 marks)**

**6.** *a)* The Code of Conduct of the BCS is divided into four main sections. Explain what these sections are and describe briefly the issues addressed by each section. **(12 marks)**

*b)* Your company is due to deliver a new water processing facility to a national water company. The facility includes real-time monitoring of chemicals and pollutants. This is a major contract for your company, but it is behind schedule and late delivery will result in heavy penalty costs. You have just been told that the company has assigned you to the project to work on the real-time monitoring sub-system. Assuming that you are an experienced programmer but have little experience of real-time systems, discuss which clauses in the Code of Conduct are relevant to this situation and how the Code might affect what you do. **(13 marks)**