THE BRITISH COMPUTER SOCIETY

THE BCS PROFESSIONAL EXAMINATION
Diploma

PROJECT MANAGEMENT

19th April 2000 - 2:30p.m. - 4:30p.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 major client of a software house has requested the provision of two additional functions to an existing order processing software system, and their initial design and development have taken place. To ensure effective testing of the functions, the Project Manager has prepared the testing schedule as given in the table below.

Activity No.	Description of Activity	Duration in days	Depends on Activity Nos.
1	Writing test plan	2	-
2	Determine costs involved	6	1
3	Create dummy data for testing	4	1
4	Testing Function A – white box	3	3
5	Testing Function B – white box	5	3
6	Testing Function A – black box	2	4
7	Testing Function B – black box	2	5
8	System Testing	6	6,7
9	Select user group for acceptance testing	1	-
10	Acceptance testing	14	8,9
11	Testing review	4	2,10

   a) Prepare a possible activity-on-arrow network diagram of the project's testing schedule. **(20 marks)**

   b) From your network diagram, determine the critical path and the minimum project duration. **(5 marks)**

2. *a)* Explain the relationship between Project Management and Quality Management. **(5 marks)**

   b) Briefly describe **FOUR** of the following project management concepts and show how each of your chosen concepts aids management of a project's quality.

   - Project costing
   - Walkthroughs
   - Joint Applications Development (JAD)
   - Configuration management
   - Post Implementation Review **(4 x 5 marks)**

3. *a)* Briefly describe **TWO** project effort estimation techniques. **(2 x 3 marks)**

   b) Discuss how each of the following computer based tools can aid project management:

   i) CASE tools **(5 marks)**
   ii) Computer-based Project Management (PM) software **(9 marks)**
   iii) Management Information Systems (MIS). **(5 marks)**

4. *a)* Explain the process by which, having produced a preliminary plan, a project manager would:

    i)   identify the number and types of staff required for a project; **(5 marks)**
    ii)   acquire the staff needed to execute the project. **(10 marks)**

    b) It is said that the progress of projects often suffers from incompatible personalities among the project team members. Explain how the risks of these personality incompatibilities can be avoided. **(10 marks)**

5. *a)* A project manager would need to report on the progress of a project to his or her senior management and project sponsors. Describe the form of this report. **(10 marks)**

    b) One activity in a project to set up a computer-based information system involves the typing into the new system of records that have previously been held in a paper-based system. Temporary staff have been employed on an hourly rate to carry out this work. Describe and justify the specific items of information that, in your view, the project manager would need to collect in order to monitor this activity. **(15 marks)**

6. *a)* Explain what is meant by *risk exposure*. **(4 marks)**

    b) An organisation is to build a new version of its key information system using a new distributed software architecture. It has no previous experience of using such architectures and intends to employ contract staff and consultants to supply the expertise.

    i)   Describe **FOUR** risks that could affect the above project. **(8 marks)**
    ii)   For each of the risks identified in *i)* identify possible contingency and preventative measures. **(8 marks)**

    c) Briefly indicate how you would decide that a particular risk reduction activity was worth undertaking. **(5 marks)**