



Department of Electronic and Computer Engineering

B302 Management and the Technology Professional

Semester 2 Examination

1.5 hours

Instructions: Answer all questions

Additional Information: This is a closed book exam

Provided: NIL

Calculators: Casio FX 85 Series or Casio FX 83 Series

Examiners: Mr C Nguyen

External Examiner: Professor R Pethig

1. **Who would you nominate for promotion to Senior Programmer during your appraisal meeting?** Indicate your decision and explain the factors that affected your analysis and decision process.

[40 Marks]

Case study source for Question 1

You are 10 months into a new job as a Programmer Analyst at a large multinational insurance company, which you joined after graduation from university. At the time you joined the company, the Development Team Manager had verbally indicated that you have the potential to be promoted to a Senior Programmer position after one year of work. Your current record is very promising, with important contributions towards the current project and another 4 completed projects.

Last week, Alfred Bowman, joined the team as a Programmer Analyst. During conversations, you learned that Alfred recently worked for 3 years at another competing insurance company and moved to the new job because it was closer to his home. Additionally, you recognized that compared to you, Alfred has more technical experience and more knowledge of the insurance business.

The annual performance appraisal process takes place next month. A key step during the appraisal process is to have each Programmer Analyst nominate one person for promotion to Senior Programmer. The Development Team Manager hears the nomination from each Programmer Analyst during their appraisal meeting. Otherwise, the nominations are not disclosed. The Development Team Manager announces the promotion at the end of the appraisal process. There are currently 5 Senior Programmers and 14 Programmer Analysts, including you and Alfred, on the team.

2. **What would you recommend for replacing the computers at the mail order business?**

(a) Indicate your decision and explain the factors that affected your analysis and decision process.

[35 Marks]

(b) Display the decision tree and present value calculations used to analyze this case study.

[25 Marks]

Case study source for Question 2

After graduation from university, you joined a small mail order business as a Systems Administrator. The company had 6 employees and 8 desktop computers at the time you joined. Now, a year later, the company has expanded to 15 employees and 21 desktop computers. Each desktop computer has an older version of Microsoft Windows XP.

The business does not have anti-virus software. Last week, there was a computer virus problem which forced several computers to become unusable. The business owner has obtained proposals from 2 vendors to replace all computers. You have been asked to review the proposals and make a recommendation.

The first vendor, Redmond Solutions, proposed to replace the desktop computers with new computers. The cost of each new desktop computer would be £350 for hardware and £125 for a Microsoft Windows 7 Professional license. The proposed contract requires 50% payment when the contract is signed and the balance after delivery. The vendor estimates that the order would take 3 months for delivery.

The second vendor, Santa Clara Systems, proposed to replace the desktop computers with a managed computing service. This service would cost £20 each month for each desktop computer placed on-site. The vendor would provide a desktop computer including a Microsoft Windows 7 Professional license. If there is a problem, the computer would be replaced within 2 business days. Additionally, the computers could be scheduled to be remotely powered on and off to reduce the electricity expenses. The proposed contract requires advance payment at the start of each 6 months period. The vendor has confirmed that they have hardware available for immediate delivery.

For both vendors, there is a 15% probability of having problems with conversion and transfer of existing business files to the new computers, which would require an additional £400 of labour costs.

The business uses an annual discount rate of 8.2% for financial analysis.