UNIVERSITI SAINS MALAYSIA

Second Semester Examination
Academic Session 1997/98

February 1998

CSI513 - Project Management in Information Technology

Duration : [3 hours]

INSTRUCTION TO CANDIDATE:

- Please ensure that this examination paper contains **FIVE** questions in **FOUR** printed pages before you start the examination.

- Answer **FOUR (4)** questions only. Answer question 1 and 2, and choose other 2 questions from questions 3 to 5.

- You can choose to answer either in Bahasa Malaysia or English.

ENGLISH VERSION OF THE QUESTION PAPER

1. (a) For a non-software project (real or fictitious) show how it can fit into SDLC phases.

    (b) What major decisions are often made during the feasibility study and how would these impact the project?

    (c) Quality and reliability are related concepts, but are fundamentally different in a number of ways. Discuss them.

    (d) Besides counting errors, are there other countable characteristics of software that imply quality? What are they and can they be measured directly?

    (e) Define the following:

    • Time Cost Events (TCE)

    • Quality Management System (QMS)

    • Critical Path Analysis (CPA)

    (25/100)

2. It is November 1998 and you are sitting in the IT manager's office. "We are going with WIN 98" she tells you. "Your next project is to install it on the 1000 PCs we have in this organisation".

    (a) You have to estimate the time that this project will take and you should carry out the following steps.

    • Think of up to ten questions that you will need to ask in order to be able to estimate this project.

    • Work out all the activities that are required for installation.

    • Estimate the total time required and an elapsed time for the project.

    (b) The IT manager would like to know what the WIN 98 upgrade is going to cost.

    • What do you need to know in order to cost the project?

    • Develop the questions and then work out the cost based upon your earlier estimate.

    (c) Work out the benefits for the upgrade and a cost benefit analysis.

    (d) Why is it important to estimate the size of a project? What are the ways to measure the size of a project?

    (25/100)

3. You have been appointed a project manager for a small software products company. Previously you were the senior system analyst. Your first job as a project manager is to build a breakthrough product that combines virtual reality hardware with state-of-the art software. Because competition for the home entertainment market is intense, there is significant pressure to get the job done.

   (a) What team structure would you choose and why?

   (b) What software process model(s) would you choose and why?

   (c) Describe some of the differences between the attitudes and values of the typical system analyst and the typical project manager.

   (d) For this particular project, how quality can be defined, measured and appraised. How does this relate to the activities of the project manager?

   (e) How would you measure the successful of this project?

                                                                              (25/100)

4. You work for a chemical manufacturer which manufactures polythene, synthetic rubber and olefin at three sites.

   In the past, the sites had operated individually using System 38, AS/400 and HP 3000s to meet their data processing needs. This year the company has earmarked US$4M to implement a client-server project. All current systems are to be replaced with RS6000s running AIX.

   The SAP R/3 suite of accounting, manufacturing and distribution modules will be installed during the next twelve months.

   The three manufacturing sites systems are going to be integrated centrally onto one system. The RS6000s will act as servers to a PC network which will have 123 users.

   (a) As project manager how would you assess the risks behind this project and what can you do to minimise them?

   (b) Describe how the risks may influence your implementation by briefly describing the way you would implement this system.

   (c) What are the items to be considered for planning this project?

   (d) Explain 3 factors that determine the complexity of this project.

                                                                              (25/100)

5. A project was in the final stages with implementation. User training due to start in two months time. The software was available and was robust. The next activity was to develop training material for about two weeks worth of user training. Two teams of trainers (team A and team B) were recruited to meet these requirements.

There were no existing training or documentation standards and the trainers were allowed to use their own standards.

Team A of trainers believed that the quality of training was improved if screen dumps are incorporated in the manuals. They started developing manuals to this standard. Team B did not incorporate screen dumps but included full user key strokes, the manuals looked acceptable.

After a month into the project you find that team A are taking longer to deliver their material than team B. They argue that it takes longer to develop to what they claim are better quality standards. You now believe that team A will not meet the deadline.

(a) What would you say are the critical deliverables of this project?

(b) What are the implications of a delay in the development of the training material?

(c) How did the problem occur in the first place and what lessons do we learn?

(d) List the items that would be useful to investigate/evaluate after a project has finished.

(e) Develop procedures that would be appropriate for the end of the development project and the disbandment of the team.

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