UNIVERSITI SAINS MALAYSIA

Second Semester Examination
Academic Session 1998/99

February 1999

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 **ALL** from questions 1 to 4 and choose any **THREE** from question 5.
- You can choose to answer either in Bahasa Malaysia or English.

ENGLISH VERSION OF THE QUESTION PAPER

1. You work for a major insurance company and have been handed control of a project for the development of a new system which will have a major impact on customer service. Customer Service Representatives (CSR) will be able to access all data relating to a particular customer and not have to transfer calls from department to department. This is a major departure from the existing system whereby each insurance division, Life, Motor, Home, etc., controlled their own data.

   The system will need to link all the databases together and provide an easy to use common user interface. Because the existing systems have been developed over a long time span they have each been developed to different standards and quality. The marketing and sales division see this system as an ideal way of bringing everything together and the IT division see it as a way of improving old systems.

   A feasibility study has already been prepared and the following benefits have been identified -

   - saving in staff in each insurance group since CSR will now handle enquiries
   - improve customer service
   - more accurate information about customers
   - improve IT systems

   (a) What *organisational structure* would you choose and why?

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

   (c) Briefly explain the tasks that you are supposed to do to develop the detail plan for the project.

   (d) What sort of resources are needed for this project?

   (e) Generate a macroscopic work break down structure for this project.

   (f) Your development budget is RM 900,000 and the estimated time is 18 months.

      (i) Approximately how much money should you devote to each phase of the software life cycle.

      (ii) Approximately how much time should you devote to each phase of the software life cycle.

   (g) Develop a timeline chart for this project.

(40/100)

2. Table below provides the cost indicator and estimated duration for a single activity in a project.

Budgeted Cost of Work Schedule (BCWS)	3 days	RM1500
Budgeted Cost of Work Performed (BCWP)	2 days	RM1000
Actual Cost of Work Performed (ACWP)	2 days	RM1200

(a) Draw a rough BCWS, BCWP and ACWP curves to illustrate the cost and schedule variances.

(b) Compute the cost and schedule variances.

(c) Analyse the variances using the Schedule Performance Index (SPI) and Cost Performance Index (CPI).

(15/100)

3. Company MEGA is developing a detailed plan for project SMART. From the scope of the project, information domain characteristics has been identified as below:

Number of user inputs: 30
Number of user outputs: 55
Number of user inquiries: 20
Number of files: 10
Number of external interfaces: 2

Assume that all complexity adjustment values are average.

Assume that processing complexity values have been counted with the total value of 112. The complexity weight is given according to this table:

Description	Complexity		
	Simple	Avg	Comp
input	x3	x4	x6
output	x4	x5	x7
inquiry	x3	x4	x6
master file & DB	x7	x10	x15
ext. interfaces	x5	x7	x10

From their experience, Company MEGA has average productivity of 6.5 function point per month and average labor rate is RM16,000 per month. Using function point based estimation, compute the estimated

(a) project cost

(b) effort

(10/100)

4. (a) Explain how a project network can be used as a tool for planning, implementation and control by the project manager.

(b) Give 5 reasons why IT project fail.

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

(d) List down 5 problem escalation corrective measures for IT project.

(20/100)

5. Answer any **THREE** of the following questions:

(a) Explain about postimplementation audit.

(b) What is the difference between software configuration audit and a formal technical review?

(c) You have been given the responsibility for improving the quality of software across your organisation. List down at least five things that you are supposed to do.

(d) Describe the difference between process and project metrics.

(e) Present an argument against lines of code as a measure for software productivity.

(15/100)

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