B. TECH.

(SEM. VI) EXAMINATION, 2006-07
SOFTWARE PROJECT MANAGEMENT

Time : 3 Hours] [Total Marks : 100

Note : Attempt all questions. Make suitable assumptions wherever necessary.

1 Attempt any two parts of the followings : 10x2=20

(a) What do you mean by Work Breakdown Structure (WBS) in context to software project and product? Discuss with examples.

(b) End users demands are the source of most software project. Justify this statement. Also give various steps of a software project plan.

(c) It has been said that the design can not be directed by technical experts alone. Do you agree with this statement? Write in detail to support your views. Give various responsibilities of a Project Manager alongwith structure of personnel organisation.

2 Attempt any two parts of the followings : 10x2=20

(a) It seems odd that cost and schedule estimates are developed during software project planning before detailed software requirement analysis or

V–1310] 1 [Contd...
design has been conducted. Why do you think that this is to be done? Are there circumstances when it should not be done? What is cash flow forecasting?

(b) Discuss cost benefit analysis in details. What are the following terms: (i) Net profit value (ii) Return on investment (iii) Pay-back period.

(c) Provide at least five examples of software development projects that would require prototyping. Name two or three applications that would be more difficult to prototype.

3 Attempt any two parts of the followings: $10 \times 2 = 20$

(a) Discuss the role of cost estimation in a software development project. Briefly explain COCOMO model for cost estimation for all category of projects.

(b) Describe the function point analysis. How function points are used in estimation of cost and efforts using decomposition technique.

(c) Is the critical path important if only one person is working on a software project? Discuss the concept of PERT/CPM in defining an optimal schedule.

4 Attempt any two parts of the followings: $10 \times 2 = 20$

(a) Risk management is the area that tries to ensure that the impact of risk on cost, quality and schedule be minimal. Justify the statement. What is decision tree analysis in context to Risk Management?
(b) List and discuss some of the points specific for identifying the risks during software development. Also give some of the category of Risks that are to be identified.

(c) As size is the main factor determining the cost of a project, an accurate size can be used to estimate the cost and schedule of the software project. Give your view in favour and in against of the statement. Also write in brief about Contract Management and Human Resource Management.

Attempt any two parts of the followings: 10×2=20

(a) Discuss about software quality factors and attributes.

(b) Develop your own metrics for correctness, maintainability, integrity and usability of software. What is Statistical Quality Assurance (SQA)?

(c) Write a short note on SEI Capability Maturity Model (CMM). How does it differ from ISO 9000?