

CE1.4-R4: PROJECT MANAGEMENT

NOTE:

1. Answer question 1 and any FOUR from questions 2 to 7.
2. Parts of the same question should be answered together and in the same sequence.

Time: 3 Hours

Total Marks: 100

1.
 - a) Why is Project Management important to the Software Development Process? What are the different activities in Project Management?
 - b) How do you quantitatively analyze the quality of a project during the development?
 - c) How to estimate the resources for a project? Which are the various options available for the estimation of the same?
 - d) How to perform variation analysis and risk analysis for a project?
 - e) Project Managers must focus on the four P's to manage the projects. Explain the four P's in brief with their relationships.
 - f) Why software reliability always takes precedence over efficiency? Explain in brief.
 - g) What are software quality problems? What are seven principles of quality system?

(7x4)

2.
 - a) Explain why the process of project planning is an iterative one and why a plan must be continually reviewed during a software project.
 - b) Discuss the techniques for estimating project duration and determining the staffing pattern.
 - c) Briefly explain how algorithm cost model can be used for estimating software cost. Explain the COCOMO for software cost estimation.

(6+6+6)

3.
 - a) How to define the project responsibilities? What kind of actions are to be taken by the project manager to bring deliverable or task back on the schedule?
 - b) What is the need of Software Quality Certification in Software Quality Assurance? Briefly explain major certification related to Software Quality Assurance.
 - c) What is meaning of Total Quality Management? What are advantages of TQM? Does ISO 9001 is aimed for TQM?

(6+6+6)

4.
 - a) What is the difference between the system life cycle and a system development methodology? What is the critical distinction between a milestones and deliverables?
 - b) What is the meaning of FTR (Formal Technical Review)? What are the guidelines to review software product? List and explain various activities involved in Software audit.
 - c) Heavy maintenance and quality of a software product are inversely proportional. Elaborate.

(6+6+6)

5.
 - a) What is a Function Point? How can the software size for the application be estimated in the function points? Using FP count, how the efforts can be estimated, provided various productivity means are given.
 - b) What is the relationship between software configuration management and software maintenance?
 - c) Why is it important to develop the cost and schedule estimates during planning before software requirement analysis or design conducted?

(6+6+6)

6.

- a) What skills does a project manager need? And also explain the need of Gantt chart and work break down structure of SPMP.
- b) What is the level of criticality in Project manager for a Project which is started in maintenance Phase? Which phase of Project management theory must be more focused for such kind of projects?

(9+9)

7.

- a) Name the risk based software development process model? What are its advantages and disadvantages? Explain how project manager would carry out the risk analysis? What would be the outcome of the risk analysis? How would the outcome of your analysis be used to manage the risk? What is early risk resolution?
- b) As a manager of a software project, to develop a product for business application, if you estimate the effort required for the completion of the project to be 50 PM. Can you complete the project by employing 50 engineers for a period of one month? Justify your answer.
- c) What is the primary goal of software configuration management? Which are the configuration management activities? What are software configuration teams?

(8+4+6)