

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) What are the generic elements that can describe the process models for any software projects minimally?
- b) Distinguish between goals, requirements and constraints.
- c) What are the features of an effective change control procedure?
- d) Distinguish between change control and version control.
- e) Write down various methods of estimation and discuss Empirical Estimation Techniques.
- f) Explain the key process areas associated with the five levels of CMM.
- g) List out any four issues involved in risk analysis and management.

(7x4)

2.

- a) What are the job responsibilities of a software project manager? Explain any two responsibilities in detail?
- b) What are the qualities attributes of well-engineered software?
- c) Define the term Software Reliability? Describe the types of uncertainty addressed in software reliability growth models.

(8+6+4)

3.

- a) What are the steps involved in SPMP? Explain in detail?
- b) Explain detail about the metrics used for project size estimation?
- c) What are the differences between work break down structures and product break down structure?

(6+6+6)

4.

- a) What are the problems of a classical waterfall model of software development? Compare the waterfall model with an iterative model and bring out the relative advantages of the iterative model over waterfall model.
- b) What are the salient issue involved with regard to Planning, Estimating and Scheduling?
- c) Explain the concept of configuration management. How is it useful for quality assurance?

(8+4+6)

5.

- a) What are the different types of risks in software project?
- b) Enumerate the risk management activities involved in software project management?
- c) Discuss the risk assessment activities in detail.

(4+6+8)

6.

- a) Briefly, discuss the Function Point model for software sizing highlighting the important elements, the multipliers and the complexity adjustment values.
- b) Compute the Function Point value for a software project with the following details:

User Inputs:	12	Number of Files:	6
User Outputs:	25	External Interfaces:	4
Inquiries:	10	Number of Algorithms:	8

Assume the multiplier at their average values and all the complexity adjustment factors at their moderate to average values.

(9+9)

7.

- a) Explain the usefulness of COCOMO II model over the COCOMO model in light of the traditional estimation techniques used hands-on by project managers.
- b) On what artifacts do you have to assess the impact of changes approved by the change control procedure?
- c) What do you understand by “playback analysis” in software projects?

(6+6+6)