

C9-R3: ADVANCED SOFTWARE 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 it necessary to plan a software project before it is executed?
- b) What are the different types of risks in software projects?
- c) What constitutes a project process review report?
- d) Why are baselines defined in software project? How do they help in software quality assurance?
- e) Name some Technology-related mistakes of software project management.
- f) The effort required for developing a software product for business application is estimated to be equal to 50 person-months. Can the project be completed by employing 50 software engineers for one month? Justify your answer.
- g) What do you mean by "Payback analysis" in software Projects?

(7x4)

2.

- a) List the major responsibilities of a software project manager.
- b) When does project planning start and end in a software project life cycle? List the important activities performed by software project managers during project planning.
- c) Briefly discuss the Project Organizational structure with the help of a diagram.

(6+6+6)

3.

- a) What are the characteristics of a Project Control System? Discuss how project control is carried out.
- b) Why is it necessary to evaluate software Projects? What are some techniques that are in use for project evaluation?

(9+9)

4.

- a) What are some size-oriented software metrics? Discuss them in the context of software size estimation.
- b) Briefly discuss the Function Point model for software sizing highlighting the important elements, the multipliers, and the complexity adjustment values.
- c) Compute the Function Point value for a software project with the following details:

User Inputs:	22	Number of Files:	10
User Outputs:	30	External Interfaces:	4
Inquiries:	16		

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

(6+6+6)

- 5.**
- a) What do you mean by Software Configuration Management (SCM)? Why is it necessary? What are the five essential functions of SCM?
 - b) What is Configuration Status Accounting? Bring out its importance in the context of Software Configuration Management.
 - c) Differentiate between version control and change control in the context of software configuration management.

(8+4+6)

- 6.**
- a) What do you mean by formal technical reviews for software quality assurance? What are its uses?
 - b) What are quality audits for software? Discuss.
 - c) Write briefly on ISO 9001 and ISO 9002 standards for software quality management and assurance.

(6+6+6)

- 7.** Write short informative notes on:
- a) Steps of project planning in the context of software projects
 - b) Work Breakdown Structure
 - c) V Process Model of software development (Including a schematic diagram)

(6+6+6)