B5.1-R4: 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) What is WBS? What is importance of it in Software Project Management? Explain criteria for completeness in the WBS.

b) Explain Project Evaluation and Review Technique with example.

c) Explain the problems that might be faced by an organization if it does not follow any software life cycle model.

d) What is Gantt chart? Explain its use for project scheduling. Give example of Gantt chart.

e) Explain significance of resources in Project Management. Explain resource allocation.

f) What is Software Quality? Explain various quality requirements of software and attributes.

g) What is Software Project Team? Explain in brief how to decide team structure and styles of team for Software Project.

(7x4)

2.

a) Suppose you are developing a software product in the organic mode. You have estimated the size of the product to be about 1,00,000 lines of code. Compute the nominal effort and development time.

b) What is Function Point Metric? Explain FP in detail. How FP overcome shortcomings of LOC? What are shortcomings of FP? How to overcome shortcoming of FP using Feature Point Metric?

c) Explain Object-Oriented Analysis and Design (OOAD) approach for Software Project Development.

(4+8+6)

3.

a) Define risk in the context of software project management. What are top-ranked risks in software projects?

b) Discuss how a software project team can deal with the risks in developing software.

c) Discuss how Risk Prioritization is carried out in the context of software development.

(8+6+4)

4.

a) Compare the traditional water-fall model with incremental model of software development. Give illustrative example highlighting the suitability of these models in software development.

b) Explain the framework developed by CMM in improving the productivity of a software organization.

(9+9)

5.

a) Explain the significance of work breakdown structure in project planning. Illustrate the Top-down approach of building work breakdown structure with an example project of your choice.

b) Consider a Library Management System with functionalities for inquiries, rentals, return reservations and fee collection. Using COCOMO technique, estimate the effort required for developing the system. State the assumptions made in the estimation.

(9+9)

6.

a) Bring out the significance of resource leveling in software projects.

b) Illustrate the PERT method of identifying the critical path of a project.

c) Give reasons to establish that software effort estimation is a risky activity.

(6+6+6)

7.

a) Explain Project Closure phase of Software Project Management. Also state what is project closure analysis and role of closure analysis?

b) What is objective of Software Project Tracking and Monitoring? Explain project monitoring and control with its purpose and task to do in this process.

c) What is Software Configuration Management? Give two reasons to establish the need for Software Configuration Management?

(6+6+6)