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)   Define a Task Set for Communication Activity in software development life cycle.
b)   What do you mean by scope creep? Why is it important to plan a software project well so as to avoid creep?
c)   Discuss the concept of version control as a software configuration management activity.
d)   Discuss, how expert judgments could be made use for the estimation of a software development effort.
e)   What is the importance of function point model for software sizing?
f)   How does a software project manager deals with the risk of unrealistic schedules and budgets?
g)   Justify that 'Software Quality Assurance is an umbrella activity."

(7x4)

2.
a)   What practices should software engineers follow to enhance the quality of software produced by their team?
b)   Explain WBS with an example.
c)   Describe the five activities associated with the software measurement process.

(6+6+6)

3.
a)   What is the importance of Configuration Management? Describe Configuration identification, Configuration Control, Configuration Status Accounting and Configuration audits.
b)   How is software scope defined? Describe steps of Pareto analysis as a statistical method for decision making.

(10+8)

4.
a)   How do software process metrics differ from software project metrics? What are the goals for using object-oriented software metrics?
b)   How are project risks different from technical risks and describe the process of building a risk table? Explain the necessary steps required for mitigating risks.

(10+8)

5.
a)   What is the relationship between schedule pressure and software project management? Discuss.
b)   Compare and contrast between COCOMO and Function point model of software sizing.
c)   What is risk assessment and control? What procedure is usually followed?

(6+6+6)

6.

a)   Consider a software project with 5 tasks T1-T5. Duration of the 5 tasks (in days) are 15, 10, 12, 25 and 10, respectively. T2 and T4 can start when T1 is complete. T3 can start when T2 is complete. T5 can start when both T3 and T4 are complete.

   i)   Draw the Gantt Chart and PERT charts for the project.
   ii)   When is the latest start date of the task T3? What is the slack time of the task T4? What is the slack time of the task T2?

b)   Explain the reasons behind the following assertion: "Adding more manpower to a late project makes it later".

([8+6]+4)

7.

a)   Compare the waterfall model with an iterative model and bring out the relative advantages of the iterative model of software development.

b)   Discuss four most important metrics for an object oriented systems. Explain their importance.

c)   Compute the Function Point value for a software project with the following details:

User Input:	15	Number of Files:	8
User Outputs:	25	External Interfaces:	3
Inquiries:	12		

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

(6+6+6)