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) Differentiate between quality assurance and quality control. Are they synonyms? Justify.
b) What is a project plan and what does it involve?
c) Define risk analysis and risk monitoring? What are things to be considered in risk management?
d) Define work breakdown structure (WBS). Give difference between conventional and evolutionary WBS. List issues related to conventional WBS.
e) Explain forward looking approach for cost and schedule estimating process.
f) Define contract management? What are the different types of contract?
g) What is an organizational structure and list key element for proper organizational structure?

                                                            (7x4)

2.
a) Explain SLIM model of project estimation.
b) Explain various types of risks involved in project management.
c) Differentiate between Waterfall Model with prototype model.

                                                            (6+6+6)

3. Determine a) network diagram b) critical path c) ES, EF, LS and LF d) free slack for each activity for the project parameters given below:

Task Number	Description	Duration (days)	Dependent on Tasks
T1	Specification	15	--
T2	Design Database	45	T1
T3	Design GUI	30	T1
T4	Code database	105	T2
T5	Code GUI part	45	T3
T6	Integrate and Test	120	T4 and T5
T7	Write user manual	60	T1

                                                            (8+4+6)

4.
a) Explain EVS (Earned Value System).
b) Differentiate between a) problem-based estimation and b) process-based estimation.

                                                            (9+9)

5.
a) Define software reliability. What is the difference between hardware & software reliability?
b) What is CMM? Describe its levels & compare it with ISO 9001?
c) Differentiate verification and validation in brief.

                                                            (6+9+3)

6.
a) Explain in brief Boehm's staffing principles.
b) Explain what is meant by stakeholder management. Also describe how project manager ensures stakeholder co-operation.
c) Write short note on contract management.

                                                            (5+8+5)

7.

a) Explain the basic fields of software change order with the help of a template of same.

b) Explain the advantages of working as a team.

c) Write a short note on SEI Capability Maturity Model (CMM). How does it differ from ISO9000?

(6+6+6)