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**

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1. (a) Differentiate between quality assurance and quality control. Are they synonyms ? Justify.

    (b) Define risk analysis and risk monitoring. What are things to be considered in risk management ?

    (c) What do you understand by software planning ? List the problems faced by software project manager in developing a high quality software project.

    (d) What is functional point ? Mention its importance. Write any three advantages of function point analysis.

    (e) Define Work breakdown structure. Draw work breakdown structure for following scenario. Draw a simple work breakdown structure for the manufacture of a bicycle.

    (f) Define contract management. What are the different types of contract ?

    (g) Explain the relationship between Time and cost with respect to project management. **(7x4)**

2. (a) What do you mean by closure and handover of project ? What should be listed in closure report ? Explain step by step procedure taken by project manager in ensuring successful closure and handover.

    (b) Explain forward looking approach for cost and schedule estimating process.

    (c) Explain empirical project estimation techniques ? Compare the basic COCOMO model with intermediate and detailed COCOMO model. **(6+6+6)**

3. (a) Explain the term Configuration management. Explain the purpose and procedures for operating a configuration management system.

    (b) Explain in detail what do you mean by "Earned Value System".

    (c) Explain the concept of software reusability with example. Explain main steps of reuse model. **(8+6+4)**

4. (a) What is CMM ? Describe its levels & compare it with ISO 9001.

    (b) Describe the qualities of a leader, especially in a project environment. **(12+6)**

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5. (a) Determine

(i) network diagram   (ii) critical path

(iii) ES, EF, LS and LF   (iv) 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

(b) Explain in detail monitoring and controlling progress. Also state key outputs.

[(4+2+4+2)+6]

6. (a) A project consisting of 6 activities (A to F), the budgets, the % complete and the actual recorded costs for a specific point in time are as shown below :

Activity	Budget £	% complete	Actual Cost £	Earned Value £
A	70	90	60	
B	40	80	50	
C	80	70	75	
D	60	20	40	
E	20	10	5	
F	80	5	10	
Total	350		240	

(i) Calculate the Earned Value for each activity.

(ii) Calculate the overall % of the project.

(iii) Calculate the CPI (or efficiency) of the project.

(iv) Calculate the estimated final cost.

(b) Explain what is meant by stakeholder management and describe how the project manager ensures stakeholder co-operation.

(c) Explain RMMM. Also explain RMMM plan. **(5+5+8)**

7. (a) What is Capability Maturity Model ? Explain with neat diagram all its levels.

(b) Explain SLIM model of project estimation. **(12+6)**

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