No. of Printed Pages : **2**

Sl. No.

CE1.4-R4 : PROJECT MANAGEMENT

NOTE :

1. **Answer question 1 and any FOUR questions from 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) Explain work breakdown structure. How WBS is constructed in project and how to draw its diagram ?

(b) Explain Project Time Management and the steps for time management process.

(c) What are the steps needed in developing the Project Staffing Management Plan ?

(d) What is critical path and how does this affect a project schedule ?

(e) Explain the relationship between software configuration management and software maintenance.

(f) What is Feasibility Study of Software Project ? Explain types of Feasibility Analysis.

(g) Why software reliability always takes precedence over efficiency ? Explain in brief. **(7x4)**

2. (a) Explain CMM with various levels of CMM. Compare ISO 9000 and CMM.

(b) What do you mean by Organizational Structure and Team Structure ? Explain types of Organizational Structures and Team Structures with its comparative studyincluding advantages and disadvantages.

(c) The process of project planning is non-iterative. Yes or no ? Justify your answer with a suitable explanation. **(7+7+4)**

3. (a) Compute function point value for a project with the following domain characteristics: No. of I/P = 30, No. of O/P = 60, No. of user Inquiries = 23, No. of files = 8, No. of external interfaces = 2. Assume that all the complexity adjustment values are average. Assume that 14 algorithms have been counted.

(b) What is COCOMO ? Explain COCOMO Model with equations.Assume that the size of an organic type software product has been estimated to be 32,000 lines of source code. Assume that the average salary of software engineers be Rs. 15,000/- per month. Determine the effort required to develop the software product and the nominal development time.

(c) Explain Halstead method of Estimation of Software with example. **(7+8+3)**

4. (a) What is Work Breakdown Structure ? Explain and compare PERT, CPM and Gantt chart method of scheduling with each other's merits and demerits.

(b) What is different kind of risk involved in Software projects ? Discuss common sources of risk in on Software projects ?

(c) What is Scope and Objective of Project ? How Scope is different from Objectives of Project ? Explain steps in Project Planning phases. **(8+6+4)**

5. (a) How is Change Management is related with Source and Version Control ? What are the various activities performed during Integrated Change Control Process ? Explain various reasons to Changes in Project ? Who is responsible to approve Change Request and based on what factor ?

(b) Why we required to do Contract Management in Project ? What are the types of Contract ? Explain stages in contract placement. What is significance of Terms and Condition of Contract. **(9+9)**

6. (a) What are the difficulties faced in measuring the Software Costs ? What is relationship between Time, Scope and Cost of Project ?

(b) What is Resource in Project ? What are the different types of resource for a project ? Explain the allocation and scheduling of these resources.

(c) Explain terms Plan Vs. Actual Cost, Cost Variance and Time cost trade off. **(6+6+6)**

7. (a) Explain various activities involved in Software Configuration Management.

(b) Discuss reasons of Project's failure or success. Give your view point on any software industry project failure. Give any case study of your field to explain your view.

(c) A software project involves execution of 5 tasks T1, T2, T3, T4 and T5 of duration 10, 15, 18, 30 and 40 days, respectively. T2 and T4 can start only after T1 completes. T3 can start after T2 completes. T5 can start only after both T3 and T4 complete.

(i) What is the slack time of the task T3 in days ?

(ii) Draw the Gantt Chart and PERT charts for the project

(iii) Identify if any Critical Path exists in this project. **(6+6+6)**

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