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**

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1. (a) What are the different techniques to estimate size of program ?

   (b) Discuss similarities and differences between software configuration management during software development and software maintenance.

   (c) What are the disadvantages of using Lines of Code (LOC) as a unit of software measurement ?

   (d) List the risks in Project Management. "Is testing a risk for the project management" ? Justify.

   (e) What is Acceptance Testing ? At what stage of project development is Acceptance Testing done ? Justify.

   (f) List the goals of Project Management.

   (g) What are the main parameters that are used while computing the costs of a software development project ?   **(7x4)**

2. (a) What is risk exposure ? What techniques can be used to control each risk ?

   (b) Explain the significance of software reliability. How is software reliability ensured with project management perspective ?

   (c) What are the different CMM levels ? What does CMM level specifies ? With what attributes can a company achieve top CMM level ?   **(4+6+8)**

3. (a) Explain all the levels of COCOMO Model.

   (b) Determine the effort required to develop the software product and nominal development time assuming the size of an organic software product has been estimated to be 25K times of code.

   (c) Differentiate between CMM and ISO. Is CMM and ISO compliance mandatory or a software development company need to have both ? Justify.   **(8+4+6)**

4. (a) Why should the Software Quality Assurance organization be independent of the development organization ?

   (b) What are the attributes of a good estimate ? Discuss with example.

   (c) Define pragmatic software metrics. What are the basic characteristics of Good Metrics ?   **(6+4+8)**

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5. (a) Discuss the advantages and disadvantages of letting people rotate between projects from different application domains as opposed to letting them become true experts in one particular application domain.

   (b) "In order to ensure the consistency on various artifacts, the major milestones concentrate on objective, operational capabilities and release issues". Explain this statement.

   (c) List and discuss the key practices that improve overall software quality. **(8+6+4)**

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

   (b) How is risk resolution carried out in the iterative process ? What is its advantage ?

   (c) Compare and contrast the project evaluation and review technique (PERT) with the critical path method (CPM). **(5+5+8)**

7. (a) One quality requirement often stated is that the system should be 'user-friendly'. Discuss possible differences between the developer's point of view and the user's point of view in defining this notion.

   (b) How may early cost estimates influence the way in which a project is executed ?

   (c) What are the differences between software configuration management in a traditional waterfall development model and the evolutionary development model ? Explain. **(5+5+8)**

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