

QP Code : 78170

(2½ hours)

Total Marks: 75

N. B.: (1) All questions are compulsory.

(2) Make suitable assumptions wherever necessary and state the assumptions made.

(3) Answers to the same question must be written together.

(4) Numbers to the right indicate marks.

(5) Draw neat labeled diagrams wherever necessary.

(6) Use of Non-programmable calculators is allowed.

1. Attempt any two of the following: 10
  - a. What are the key practices that improve overall software quality?
  - b. Explain predominant cost estimation process. List the attributes of good software cost estimate.
  - c. List Boehm's top ten principles of conventional software project management.
  - d. What are the five fundamental parameters of software cost model?
2. Attempt any two of the following: 10
  - a. Explain the modern process approaches for solving top ten risks in the conventional process.
  - b. Explain the importance of software architecture. State the three different aspects of software architecture from management perspective.
  - c. Give a brief account of management set artifacts.
  - d. Explain the primary objectives and essential activities for the elaboration phase.
3. Attempt any two of the following: 10
  - a. With the help of a diagram, explain the workflow of an iteration.
  - b. Explain the four major milestones in a project life cycle.
  - c. Define WBS. Write a short note on evolutionary WBS.
  - d. Write short note on periodic status assessment. List the contents of status assessment reviews.
4. Attempt any two of the following: 10
  - a. What are the main features of default project organization? List the responsibilities of software management team.
  - b. Explain the different states through which the project environment artifacts evolve.
  - c. Discuss organization's infrastructure from process automation perspective.
  - d. State the responsibilities of PRA and SEEA.
5. Attempt any two of the following: 10
  - a. What are the three fundamental sets of management metrics? Explain any two management indicators.
  - b. Define the following terms:  
i) Change traffic ii) Breakage iii) Rework iv) MTBF v) Modularity
  - c. Explain the process discriminators that result from differences in stakeholder cohesion.
  - d. What are the different ways to measure scale of the project? Compare trivial-sized projects and moderate-sized projects.

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6. Attempt any two of the following: 10
- a. Explain the nine best practices of software management listed by "Airline Software Council".
  - b. Discuss continuous integration approach of modern project management.
  - c. Discuss some indicators of a successful transition to a modern culture focused on improved software business performance.
  - d. Give an account of next-generation software cost estimation models.
7. Attempt any three of the following: 15
- a. Explain how object oriented technology contributes to software economics. List Booch's reasons for the success of object-oriented projects.
  - b. Define artifact. Write a short note on Vision document and Software user manual.
  - c. Discuss bottom-up approach for cost and schedule estimating process.
  - d. Write short note on configuration baseline.
  - e. Explain the basic characteristics of a good metric.
  - f. Compare the characteristics of conventional software process with modern iterative development process framework.
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