

(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**

- What are the five basic parameters that are involved in estimating the cost of a software project?
- Explain Booch's reasons for the success of object-oriented projects. State the characteristics of a successful object-oriented project.
- Explain the five necessary improvements to waterfall model.
- What are the best practices to be followed for improving the overall quality of software?

2 Attempt any two of the following:**10**

- Write short note on vision document and business case.
- Explain the top five principles of modern software management.
- State the objectives, activities and evaluation criteria of construction phase of software development process.
- Explain the technical perspective of software architecture.

3 Attempt any two of the following:**10**

- Explain the artifacts and life cycle emphasis associated with environment and requirement workflow.
- Explain the different major milestones in a project life-cycle.
- Define WBS. Explain the issues related to the conventional WBS.
- List the purpose of milestones in the project life cycle. State the three types of joint management review.

4 Attempt any two of the following:**10**

- What are the key points that software architecture team should focus on? List their roles, artifacts and responsibilities.
- What is software change order? What are the primitive components of a software change order?
- Explain the three discrete states through which the project environment artifacts evolve?
- With the help of diagram explain the default roles and responsibilities in a software line-of-business organization.

5 Attempt any two of the following:**10**

- Define metric. List out the basic characteristics of a good metric.
- Summarize process discrimination that result from difference in process flexibility.
- What is scale of the project? Which are the ways to decide the scale of project? Explain different types of project according to the scale
- What are the three fundamental sets of management metrics? Briefly explain any two management indicators.

[TURN OVER]

6 Attempt any two of the following:

10

- a Briefly explain the culture shifts in order to avoid friction in transitioning to modern software process.
- b Explain next generation cost models giving emphasis on engineering and production stage.
- c What are the characteristics of modern iterative development framework ? What are the steps to follow to transition to a mature iterative development process ?
- d Explain best practices of software management listed out by “Airline Software Council”.

7 Attempt any three of the following:

15

- a With the help of diagram explain predominant cost estimation process. What are the characteristics of a good estimate?
- b Explain the difference between the engineering and production stages of software development with reference to different life-cycle aspects.
- c Explain bottom-up and top-down approach of cost and schedule estimating process.
- d Explain how round-trip engineering is a key requirement for environments that support iterative development.
- e Write short note on
 - i) Bohr-bugs and Heisen-bugs ii) Rework and Adaptability
- f. Explain the five recurring issues of conventional process.