

Q. P. Code: 08219

(Time: 2 $\frac{1}{2}$ hours)

[Marks: 75]

Please check whether you have got the right question paper.

- 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:

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- Explain how software product size can be reduced. Also discuss how it contributes to the improvement of software economics?
- What are the best practices to be followed for improving the overall quality of software?
- Explain five symptoms of a project that is headed for trouble.
- Explain the three generations of software economics.

2. Attempt any two of the following:

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- What are the primary objectives during engineering stage of a modern software development process?
- Explain the top five principles of modern software management.
- What is an artifact? What are the two forms of requirements addressed in release specification?
- Explain the importance of software architecture. State the three different aspects of software architecture from management perspective.

3. Attempt any two of the following:

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- List the purpose of milestones in the project life cycle. State the three types of joint management review.
- Explain forward and backward-looking approach of cost and schedule estimating process.
- What is the significance of periodic status assessments? Explain the default content of status assessment reviews
- Explain the concept of workflow? Describe major workflows involved in software development.

4. Attempt any two of the following:

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- Why an independent team is used for software assessment? Explain the activities of software assessment team over the project life cycle.
- Explain the automation aids and tool components that support the process workflows.

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- c. What are the main features of default line-of-business organization? What are the typical components of the organizational infrastructure?
- d. What is software change order? What are the primitive components of a software change order?

5. Attempt any two of the following:

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- a. What is software project control panel? Describe the basic operational concept for an SPCP?
- b. Explain the differences in schedule distribution and workflow priorities for small and large projects.
- c. Explain the key differences in the process primitives for varying levels of architectural risk.
- d. What are the three fundamental sets of management metrics? Explain any two management indicators.

6. Attempt any two of the following:

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- a. What are the characteristics of modern iterative development framework? What are the steps to follow to transition to a mature iterative development process?
- b. Give an account of next-generation software cost estimation models.
- c. Discuss nine best practices of software management.
- d. With the help of diagram explain risk profile of a modern project across its life cycle.

7. Attempt any three of the following:

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- a. With the help of diagram explain predominant cost estimation process. What are the characteristics of a good estimate?
- b. Write short note on implementation and deployment set.
- c. Define WBS. Write short note on evolutionary WBS.
- d. Write short note on organization policy.
- e. Define the following terms:
i) Adaptability ii) Breakage iii) Rework iv) Maturity v) Stability
- f. Explain any five indicators of a successful transition to a modern culture focused on improved software business performance.