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: **10**

a.   Explain how software product size can be reduced. Also discuss how it contributes to the improvement of software economics?

b.   What are the best practices to be followed for improving the overall quality of software?

c.   Explain five symptoms of a project that is headed for trouble.

d.   Explain the three generations of software economics.

2.   Attempt _any two_ of the following: **10**

a.   What are the primary objectives during engineering stage of a modern software development process?

b.   Explain the top five principles of modern software management.

c.   What is an artifact? What are the two forms of requirements addressed in release specification?

d.   Explain the importance of software architecture. State the three different aspects of software architecture from management perspective.

3.   Attempt _any two_ of the following: **10**

a.   List the purpose of milestones in the project life cycle. State the three types of joint management review.

b.   Explain forward and backward-looking approach of cost and schedule estimating process.

c.   What is the significance of periodic status assessments? Explain the default content of status assessment reviews

d.   Explain the concept of workflow? Describe major workflows involved in software development.

4.   Attempt _any two_ of the following: **10**

a.   Why an independent team is used for software assessment? Explain the activities of software assessment team over the project life cycle.

b.   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:**   **10**
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:**   **10**
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:**   **15**
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.

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