M.C.A. Semester I Examination 2025-26
Computer Science
CS-205 : Software Engineering

Time : Three hours   **Max. Marks : 70**

(Write your Roll No. at the top immediately on the receipt of this question paper)

Note: Answer any 5 questions. All questions carry equal marks.

1. a. Discuss the different challenges faced by Software Engineering domain related to industrial strength software.   [7]
    b. What do you understand by software quality? Discuss the six quality attributes in detail.   [7]

2. a. Discuss the approach of Software Engineering.   [7]
    b. Discuss the desirable properties of a software process model.   [7]

3. a. Discuss the time-boxing model of software development. Also discuss the types of projects it is best suited for.   [7]
    b. Discuss the spiral software development model. Also discuss the type of projects it is best suited for.
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4. a. Discuss in detail about how Software Change Management Process is done.   [7]
    b. Discuss about the Capability Maturity Model (CMM) framework for software process improvement.
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5. a. Discuss in detail the problem analysis phase of requirement analysis.   [7]
    b. What do you understand by software architecture? Discuss the key uses of architectural descriptions.
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6. a. Discuss the different levels of design in detail. Which of these levels is the architectural design. [7]
    b. Discuss the main concepts of Object-Oriented design in detail.   [7]

7. a. Differentiate between black-box and white-box testing with the help of examples. What do you understand by incremental testing?   [7]
    b. Discuss the different levels of testing in detail.   [7]