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21CS61

Sixth Semester B.E./B.Tech. Degree Examination, June/July 2025 Software Engineering and Project Management

Time: 3 hrs.

Max. Marks: 100

Note: Answer any FIVE full questions, choosing ONE full question from each module.

Module-1

- 1 a. What is a software? What are the characteristics of software that is different from hardware? (08 Marks)
- b. Demonstrate the role of each activity in a generic process framework for software engineering. (08 Marks)
- c. Software engineering is a layered technology. Justify with necessary diagram and explanation. (04 Marks)

OR

- 2 a. Explain waterfall model along with its variation with neat diagram. (08 Marks)
- b. Interpret the seven general principles that focus on software engineering. (08 Marks)
- c. Justify that prototyping serves as the better mechanism for identifying software requirements. (04 Marks)

Module-2

- 3 a. Describe the distinct tasks of requirement engineering. (08 Marks)
- b. Sketch an activity diagram for access camera surveillance via the internet–display camera views function. (08 Marks)
- c. Show how the requirements can be validated. (04 Marks)

OR

- 4 a. Discuss the concepts of data modeling with examples. (08 Marks)
- b. Demonstrate the use of CRC modelling in system requirements with an example. (08 Marks)
- c. Distinguish among association, multiplicity and dependencies. (04 Marks)

Module-3

- 5 a. What is Agility? Explain agility principles to be followed to achieve agility. (10 Marks)
- b. Demonstrate extreme programming with diagram and give its values. (10 Marks)

OR

- 6 a. Describe adaptive software development and scrum agile process models. (10 Marks)
- b. Interpret the principles of framework activity “communication”. (10 Marks)

Module-4

- 7 a. What are activities covered by software project management? (06 Marks)
- b. Analyze the software development life cycle with reference to ISO 12207. (10 Marks)
- c. Discuss W5HH principle. (04 Marks)

Important Note : 1. On completing your answers, compulsorily draw diagonal cross lines on the remaining blank pages.
2. Any revealing of identification, appeal to evaluator and /or equations written eg, 42+8 = 50, will be treated as malpractice.

OR

- 8 a. Discuss the process of setting objectives for project. (06 Marks)
b. Examine the activities involved in software project management and functioning of the project control cycle. (10 Marks)
c. Differentiate between software development and project management life cycles. (04 Marks)

Module-5

- 9 a. Demonstrate the place of software quality in stepwise framework with neat diagram. (10 Marks)
b. Distinguish between Dromey's quality model and Boehm's quality model. (10 Marks)

OR

- 10 a. Give an insight on ISO 9126 with reference to software quality. (10 Marks)
b. Analyze the role of Capability Maturity Model (CMM) to improve quality of software development. (10 Marks)

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