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Fourth Semester B.E. Degree Examination, July/August 2022
Software Engineering

Time: 3 hrs.

Max. Marks: 100

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

Module-1

- 1 a. Define software engineering. Discuss the four important attributes and ethical responsibilities that all software professional should have. (10 Marks)
- b. Describe the salient features of spiral model of software development. (05 Marks)
- c. Explain the working of waterfall model with a neat sketch. (05 Marks)

OR

- 2 a. Explain the classification of non functional requirement with a neat sketch and example. (10 Marks)
- b. Explain the structures of software requirement documentation. Discuss the various types of checks that should be carried out in requirement – and its techniques. (10 Marks)

Module-2

- 3 a. Illustrate the working of context model and interaction model for patient interaction system. (10 Marks)
- b. Explain structural model with example and neat sketch. Represent the state diagram of microwave oven. (10 Marks)

OR

- 4 a. With neat sketch explain the working of RUP with its advantages and disadvantages. (10 Marks)
- b. Define design pattern. Explain the 4 essential elements of design patterns. Discuss the implementation issues. (10 Marks)

Module-3

- 5 a. Explain test driven software development with a neat diagram and its benefits. (10 Marks)
- b. Explain release testing and user testing. (10 Marks)

OR

- 6 a. Explain software evolution process with a neat diagram and Lehman's law for evolution dynamics. (10 Marks)
- b. Explain software Re-engineering process with a neat sketch. (10 Marks)

Module-4

- 7 a. Explain three stages of project planning. Illustrate planning process with neat sketch with project plans. (10 Marks)
- b. Explain the working model of COCOMO project estimation method with a neat diagram. (10 Marks)

OR

- 8 a. Explain the 3 principles of software quality management with outline structure for quality plan and the importance of software standards. (10 Marks)
- b. With a neat diagram, explain the software review process and inspection checklist. (10 Marks)

Module-5

- 9 a. Explain the principles of Agile method with its disadvantages and Manifesto principles. (10 Marks)
b. Explain Agile process development using SCRUM method with its characteristics and advantages. (10 Marks)

OR

- 10 a. Explain extreme programming with a neat sketch and its practices. (10 Marks)
b. Explain the scaling of Agile methods for large systems with its advantages and disadvantages. (10 Marks)

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