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17CS45

Fourth Semester B.E. Degree Examination, Feb./Mar. 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. What are the fundamental activities of software engineering process? Explain waterfall process model with neat diagram. (08 Marks)
- b. What is software engineering, what are the key challenges facing software engineering? Explain. (05 Marks)
- c. List and explain five IEEE standard software engineering code and ethics. (07 Marks)

OR

- 2 a. Explain software requirement engineering process with neat diagram. (08 Marks)
- b. Differential between functional v/s non-functional requirements of system. (05 Marks)
- c. Write the structures of the Software Requirements Specification (SRS) document as suggested by IEEE standard. (07 Marks)

Module-2

- 3 a. Write context diagram of MHC – PMS software. (05 Marks)
- b. Write and explain sequence diagram of MHC – PMS system. (08 Marks)
- c. What is Model Driven Engineering (MDE)? Explain three types of abstract model system. (07 Marks)

OR

- 4 a. What are the object classes of weather station mention and explain. (05 Marks)
- b. Write state diagram of weather station system and explain. (08 Marks)
- c. What is software reuse? Explain open source software licensing. (07 Marks)

Module-3

- 5 a. Explain the general model of the software testing process. (05 Marks)
- b. Explain acceptance testing with neat diagram. (08 Marks)
- c. Explain Test Driven Development (TDD), with neat diagram. (07 Marks)

OR

- 6 a. Define software evolution. Explain software evolution process with neat diagram. (08 Marks)
- b. Explain Lehman's laws of program evolution dynamics. (05 Marks)
- c. Explain software re-engineering process with neat diagram. (07 Marks)

Module-4

- 7 a. Discuss factor affecting software pricing. (05 Marks)
b. Explain project scheduling process with example. (07 Marks)
c. Explain software cost estimation techniques and COCOMO – II model. (08 Marks)

OR

- 8 a. Discuss software quality attributes. (07 Marks)
b. Explain the inspection checks in program inspection. (08 Marks)
c. Write a note on software standards. (05 Marks)

Module-5

- 9 a. Explain coping with change of software and requirements with diagram. (05 Marks)
b. Explain the principles of agile methods and development process. (07 Marks)
c. Explain extreme programming release with neat diagram. (08 Marks)

OR

- 10 a. Explain SCRUM process, cycle and mention merits and SCRUM process. (08 Marks)
b. Explain scaling agile methods. (07 Marks)
c. Write a note on pair programming. (05 Marks)
