

# CBCS SCHEME



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## Fourth Semester B.E. Degree Examination, Dec.2019/Jan.2020 Software Engineering

Time: 3 hrs.

Max. Marks: 80

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

### Module-1

- 1 a. What are the attributes of good software? (04 Marks)  
b. With a neat diagram, explain the requirement engineering process. (08 Marks)  
c. Explain four professional and ethical responsibilities of a software engineer. (04 Marks)

OR

- 2 a. List and explain the métiers used for specifying non-functional requirements. (05 Marks)  
b. With a neat block diagram, explain the spiral process model. (07 Marks)  
c. Define functional requirements and explain. (04 Marks)

### Module-2

- 3 a. With a neat diagram, explain the rational unified process. (06 Marks)  
b. Draw a state machine model of a simple microwave oven. (05 Marks)  
c. What are the different types of UML diagram? Explain. (05 Marks)

OR

- 4 a. What is design pattern? Explain four elements of design pattern. (06 Marks)  
b. What is reuse? Explain the types of reuse levels. (05 Marks)  
c. Write a short note on open source development. (05 Marks)

### Module-3

- 5 a. Define the terms verification and validation. (02 Marks)  
b. What is interface testing? Explain the interface components and interface errors. (08 Marks)  
c. Explain test-driven development with diagram. (06 Marks)

OR

- 6 a. Explain the following : i) Release testing ii) Regression testing iii) Unit testing. (06 Marks)  
b. What is software testing? What are the distinct goals of testing process? Write the advantages of software inspection over testing? (06 Marks)  
c. Explain the Leman's law. (04 Marks)

### Module-4

- 7 a. What are the factors affecting software pricing? Explain. (06 Marks)  
b. With a neat diagram, explain cocomo – II model. (10 Marks)

OR

- 8 a. Explain the activities involved in re-engineering process, with an illustrative figure. (08 Marks)  
b. What are estimation techniques? Explain. (08 Marks)

### Module-5

- 9 a. What is program inspection? Write an inspection checklist. (08 Marks)  
b. Explain the practices involved in the extreme programming. (08 Marks)

OR

- 10 a. State the principles of agile methods. (06 Marks)  
b. Write a short note on : i) Pair programming ii) Refactoring. (10 Marks)

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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.