

# CBCS SCHEME

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17CS45

Fourth Semester B.E. Degree Examination, Aug./Sept.2020

## 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 is a Software? List and explain Software Engineering Ethics. (07 Marks)
- b. Explain Boehm's Spiral model with a neat diagram. (07 Marks)
- c. Explain Ethnography in detail. (06 Marks)

OR

- 2 a. Explain software design process with a neat diagram. (06 Marks)
- b. Explain various stages of software testing process. (06 Marks)
- c. Explain interviewing and scenarios. (08 Marks)

### Module-2

- 3 a. What is behavioural model? Explain data driven model with a neat diagram. (07 Marks)
- b. What is a state diagram? Explain the working of microwave oven with a neat diagram. (06 Marks)
- c. Explain model driven architecture with a neat diagram. (07 Marks)

OR

- 4 a. What is RUP? Explain the phases in rational unified process. (08 Marks)
- b. What is a pattern? Explain observer pattern. (06 Marks)
- c. Explain three implementation issues. (06 Marks)

### Module-3

- 5 a. State and explain development testing and its three levels unit testing, component testing and system testing. (07 Marks)
- b. What is test driven development? State the benefits of test driven development. (07 Marks)
- c. Explain scenario and performance testing. (06 Marks)

OR

- 6 a. With a neat diagram, explain the software evolution process. (06 Marks)
- b. Explain the Lehman's law concern to the system changes. (08 Marks)
- c. What is software maintenance? State the activities of reengineering process. (06 Marks)

### Module-4

- 7 a. Explain the factors affecting software pricing. (05 Marks)
- b. Explain project planning process with a neat diagram. (05 Marks)
- c. List and explain various COCOMO cost estimation model. (10 Marks)

OR

- 8 a. Explain software review process with a neat diagram. (07 Marks)
- b. What is Program Inspection? Explain inspection check list. (07 Marks)
- c. What are product metrics? Discuss two classes of product metrics. Explain static software product metrics. (06 Marks)

**Module-5**

- 9 a. Explain the ways of coping with changes and reduction of rework cost. (06 Marks)  
b. Explain the process of prototype development. What are its benefits? (08 Marks)  
c. List and explain the various extreme programming practices. (06 Marks)

OR

- 10 a. What is pair programming? List the advantages of pair programming. (05 Marks)  
b. Distinguish between plan driven and agile development with a heat diagram. (08 Marks)  
c. Explain SCRUM process with its characteristics. (07 Marks)

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