

# CBCS Scheme

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16MCA34

## Third Semester MCA Degree Examination, Dec.2017/Jan.2018 Software Engineering

Time: 3 hrs.

Max. Marks: 80

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

### Module-1

- 1 a. What is software? Explain the attributes of good software. (06 Marks)  
b. Explain the professional responsibilities of a software engineer. (05 Marks)  
c. What are the basic principles of agile software development? (05 Marks)

OR

- 2 a. Explain the Waterfall model with its merits and demerits. (08 Marks)  
b. List and explain the extreme programming practices. (08 Marks)

### Module-2

- 3 a. Explain the general structure of a requirements document suggested by IEEE. (08 Marks)  
b. Explain notations used for writing system requirements specification. (08 Marks)

OR

- 4 a. Explain the requirements elicitation and analysis process. (08 Marks)  
b. With a neat diagram, explain the CBSE process. (08 Marks)

### Module-3

- 5 a. Explain the four types of system models with example. (12 Marks)  
b. Discuss functional and non-functional requirements with examples. (04 Marks)

OR

- 6 a. What is architecture? Explain the role of software architecture. (06 Marks)  
b. Briefly explain the three architecture views. (10 Marks)

### Module-4

- 7 a. Briefly explain software as a service. (08 Marks)  
b. Explain the most important design issues that have to be considered in distributed systems engineering. (08 Marks)

OR

- 8 a. Discuss the two-tier client-server architecture used for distributed systems. (08 Marks)  
b. Write a note on function-oriented design. (08 Marks)

### Module-5

- 9 a. What is software testing? Explain the following black box testing techniques:  
i) Equivalence partitioning ii) Boundary value analysis (08 Marks)  
b. What is white box testing? Explain control flow based criteria and data flow based testing. (08 Marks)

OR

- 10 a. Discuss project scheduling and staffing. (08 Marks)  
b. What is risk management? Briefly explain the risk management activities. (08 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.