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13MCA33

**Third Semester MCA Degree Examination, June/July 2015**  
**Software Engineering**

Time: 3 hrs.

Max. Marks:100

**Note: Answer any FIVE full questions.**

- 1 a. What is software? Explain the different attributes of a good software. (05 Marks)  
b. Explain the various key challenges being faced in software engineering. (05 Marks)  
c. What are the professional and ethical responsibilities a software engineer should have? (05 Marks)  
d. Give a brief description of software engineering diversity. (05 Marks)
- 2 a. Explain with a neat diagram, the Boehm spiral model of software development process. What are merits and demerits of spiral model? (10 Marks)  
b. What is software prototyping? What are its merits? (04 Marks)  
c. Explain the various principles of agile methods. (06 Marks)
- 3 a. Explain the general structure of a software requirement document suggested by IEEE. (06 Marks)  
b. Clearly distinguish between functional and non functional requirements. (06 Marks)  
c. With a neat diagram, explain the different types of activities that are performed in the requirement engineering process. (08 Marks)
- 4 a. What is meant by system model? Explain in detail different behavioral model with examples. (10 Marks)  
b. Explain different types of architectural styles for component and connector view. (10 Marks)
- 5 a. What is meant by component? Explain basic elements of component model. (10 Marks)  
b. Explain the process of CBSE. (10 Marks)
- 6 a. Describe issues of distributed system. (06 Marks)  
b. Explain client server computing. Discuss its advantages and disadvantages. (10 Marks)  
c. What are the characteristics of software as a service? (04 Marks)
- 7 a. What are the factors to be considered during the process of staff selection? (08 Marks)  
b. Explain the activities of software configuration management plan. (08 Marks)  
c. What is project monitoring plan? (04 Marks)
- 8 a. What are the objectives of testing? (06 Marks)  
b. Briefly explain the black box testing with advantages. (10 Marks)  
c. Write a note on software testing process. (04 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.