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13MCA33

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

Time: 3 hrs.

Max. Marks:100

Note: Answer any FIVE full questions.

- 1 a. Explain the fundamental activities in software engineering. (08 Marks)
b. List out the four essential attributes of good software. (04 Marks)
c. Discuss eight principles of IEEE/ACM code of software engineering ethics. (08 Marks)
- 2 a. Define software process. Explain Boehm's spiral model of software process. (10 Marks)
b. Differentiate between plan-driven development and agile methods. (06 Marks)
c. Explain any four extreme programming practices. (04 Marks)
- 3 a. Illustrate the difference between user requirements and system requirements using an example. (08 Marks)
b. Define ethnography. Discuss its advantages and disadvantages. (06 Marks)
c. Explain the stages of requirements engineering. (06 Marks)
- 4 a. Discuss various interaction models. Demonstrate using ATM scenario. (10 Marks)
b. Differentiate between data-driven modeling and event driven modeling. (06 Marks)
c. Write short note on component and connector view architecture. (04 Marks)
- 5 a. Discuss the role of coupling and cohesion in software design. (04 Marks)
b. Mention the importance of structure charts in function-oriented design using an example. (06 Marks)
c. Explain the essentials of component-based software engineering (CBSE). (06 Marks)
d. List out the basic elements of a component model. (04 Marks)
- 6 a. What are the advantages of using a distributed approach to system development? (06 Marks)
b. Discuss various types of client-server architectural patterns. (06 Marks)
c. Write short note on Software as a Service. (08 Marks)
- 7 a. What are various project planning tasks? (10 Marks)
b. Explain i) Top-down ii) Bottom-up effort estimation models. (10 Marks)
- 8 a. What is a test plan? Describe various information contained in a test plan document. (08 Marks)
b. Explain any two black box testing techniques. (12 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.