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13MCA33

Third Semester MCA Degree Examination, Dec.2014/Jan.2015

Software Engineering

Time: 3 hrs.

Max. Marks: 100

Note: Answer any FIVE full questions.

- 1 a. Define software. Explain the categories of software. Explain the qualities of a good software. (08 Marks)
b. Explain the challenges faced by software engineering. (06 Marks)
c. Explain the professional responsibilities of a software engineer. (06 Marks)
- 2 a. Explain reuse oriented software engineering with a neat diagram. (08 Marks)
b. Explain requirement engineering process with a neat diagram. (12 Marks)
- 3 a. Differentiate between waterfall model and spiral model. (04 Marks)
b. Explain Boehm's spiral model with a neat diagram. (10 Marks)
c. Explain rational unified process with a neat diagram. (06 Marks)
- 4 a. Explain the principles of agile methods. (06 Marks)
b. Explain extreme programming with a neat diagram. (08 Marks)
c. Explain the scrum approach of agile methodology with a neat diagram. (06 Marks)
- 5 a. Differentiate between functional and non functional requirements. (04 Marks)
b. Explain IEEE structure of SRS document. (08 Marks)
c. Explain the ways of writing a system requirement specification. (08 Marks)
- 6 a. Explain the principal stages of requirement management with a neat diagram. (08 Marks)
b. Explain the different perspectives of the system modeling with examples. (12 Marks)
- 7 a. Explain the basic elements of a component model with a neat diagram. (08 Marks)
b. Explain the architectural pattern for distributed systems with a neat diagram. (12 Marks)
- 8 Briefly explain the following:
a. Types of effort estimation approaches
b. Risk management planning approach
c. Types of cohesion techniques
d. Data flow diagram of an ATM (20 Marks)

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.