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10MCA42

Fourth Semester MCA Degree Examination, Dec.2015/Jan.2016
Software Engineering

Time: 3 hrs.

Max. Marks: 100

Note: Answer any FIVE full questions.

- 1 a. What is software and what is meant by software engineering? Discuss the attributes of a good software. (06 Marks)
b. Discuss the professional and ethical responsibilities of a software engineer. (04 Marks)
c. With a neat diagram, explain the systems engineering process. (10 Marks)
- 2 a. Explain the spiral development model of a software process. (10 Marks)
b. Discuss the different phases of the rational unified process. What are the fundamental best practices recommended for use in systems development? (10 Marks)
- 3 a. What are non-functional requirements? Explain with a diagram, the different types of non-functional requirements. (10 Marks)
b. Explain the process activities of requirements elicitation and analysis. (10 Marks)
- 4 a. Illustrate the behavioural and object models with proper examples. (10 Marks)
b. Explain in detail the process of risk management. (10 Marks)
- 5 a. What is meant by architectural design? Explain the two generic control styles used in software systems. (10 Marks)
b. Explain the various stages of object oriented design process. (10 Marks)
- 6 a. Explain in detail, the principles of agile methods. (10 Marks)
b. Discuss the principal factors that affect the re-engineering costs. What are the advantages of re-engineering a software system? (06 Marks)
c. Explain the activities in the re-engineering process of a software. (04 Marks)
- 7 a. Explain with a neat diagram, the activities in the inspection process. (08 Marks)
b. What is system testing and component testing? Explain their different phases. (10 Marks)
c. Differentiate between verification and validation. (02 Marks)
- 8 a. Explain the people capability maturity model for software process. (10 Marks)
b. Explain the factors affecting software engineering productivity and also software pricing. (10 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.