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10IS51

**Fifth Semester B.E. Degree Examination, June/July 2019**  
**Software Engineering**

Time: 3 hrs.

Max. Marks:100

**Note: Answer any FIVE full questions, selecting  
at least TWO questions from each part.**

**PART - A**

- 1 a. What are the attributes of a good software? Explain. Also list and explain the key challenges facing software engineering. (07 Marks)
- b. Explain two types of emergent properties. Give examples for emergent properties. (06 Marks)
- c. Explain legacy system components with a neat diagram. (07 Marks)
- 2 a. What are critical systems? Explain different types of critical systems. Give examples to each. (06 Marks)
- b. With a neat diagram, describe the water fall model of software development process. (10 Marks)
- c. Explain the various phases of rational unified process. (04 Marks)
- 3 a. What are functional and non-functional requirements? Discuss the functional requirements in detail. (08 Marks)
- b. What are the requirements validation techniques? Explain briefly. (06 Marks)
- c. Explain the structure of the requirements document. (06 Marks)
- 4 a. Write short notes on : (i) Context model (ii) Object model. (10 Marks)
- b. Explain the risk management process with a neat sketches. Explain any one of its stage in detail. (10 Marks)

**PART - B**

- 5 a. With an example describe the repository model and give its advantages and disadvantages. (10 Marks)
- b. Explain two generic control styles with examples. (06 Marks)
- c. Mention and define two types of design models of object oriented design. (04 Marks)
- 6 a. What is extreme programming (XP)? Explain a number of practices involving in extreme programming (XP). (08 Marks)
- b. Discuss the principles of agile methods. (05 Marks)
- c. Explain re-engineering process with a neat diagram. (07 Marks)
- 7 a. Explain the activities in the inspection process with a neat diagram. (06 Marks)
- b. Write a short notes on :
  - (i) Integration testing.
  - (ii) Release testing.
  - (iii) Performance testing. (09 Marks)
- c. What is path testing? Draw a flow graph for a binary search routine. (05 Marks)
- 8 a. Explain factors governing staff selection. (10 Marks)
- b. Discuss in detail algorithmic cost models in project planning. (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.