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06CS/IS51

## Fifth Semester B.E. Degree Examination, December 2010

### 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 good software? What are the key challenges facing software engineering? (10 Marks)
  - b. Describe the general model of design process. (06 Marks)
  - c. Explain the requirements engineering process, with a neat block diagram. (04 Marks)
  
- 2
  - a. Describe four different types of non-functional requirement, which may be placed, on the systems. Give examples of each of these types of requirements. (10 Marks)
  - b. Describe the salient features of spiral model of software process, with an illustration diagram. (10 Marks)
  
- 3
  - a. With a neat block diagram, explain components of a CASE TOOLS for structured method support. (10 Marks)
  - b. What are the most important dimensions of system dependability? (06 Marks)
  - c. What is requirement elicitation and analysis? Explain. (04 Marks)
  
- 4
  - a. Explain state machine model for a simple microwave oven. (10 Marks)
  - b. Write the structure of a requirement document suggest by IEEE standard. (05 Marks)
  - c. What is object aggregation? Explain with an example. (05 Marks)

#### PART – B

- 5
  - a. Explain with a figure, the data flow model of an invoice processing system. (10 Marks)
  - b. Draw and explain the sequence and state diagram for a typical weather station. (10 Marks)
  
- 6
  - a. Explain the structure of a software test plan. (07 Marks)
  - b. Give a brief description of five principles of agile methods. (07 Marks)
  - c. Discuss the advantages of pair programming. (06 Marks)
  
- 7
  - a. Explain the characteristics of clean room software development. (07 Marks)
  - b. What are the characteristics of rapid software development? (07 Marks)
  - c. What is software prototyping? Give benefits of software prototyping. (06 Marks)
  
- 8
  - a. Differentiate between black box testing and white box testing. (07 Marks)
  - b. List the factors governing staff selection. (07 Marks)
  - c. Name the various estimation techniques in software systems. (06 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.

