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06IS51

Fifth Semester B.E. Degree Examination, June/July 2013
Software Engineering

Time: 3 hrs.

Max. Marks:100

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

PART – A

- 1 a. What are the key challenges faced by software engineering? Give an example for how delivery is challenge. (10 Marks)
b. Explain the emergent system properties. (10 Marks)
- 2 a. What are various types of critical systems? Give example to each and state at least one reason why your example is critical. (10 Marks)
b. With neat sketch, explain the spiral model of software development process. Give its advantages. (10 Marks)
- 3 a. Explain non-functional requirements giving examples to each types (product, organization, external). (08 Marks)
b. Discuss the problems with using natural languages for requirement specifications. (08 Marks)
c. Write the structure of standard requirement Document. (04 Marks)
- 4 a. Write the state chart for microwave oven model. Indicate all the possible states and their descriptions. (10 Marks)
b. Explain the software project management activities. (10 Marks)

PART – B

- 5 a. Discuss the various architectural design decision made during software design. (10 Marks)
b. Distinguish between centralized control and event based control styles. Give one example to each. (05 Marks)
c. What are the advantages of adapting object models for modular decompositions? (05 Marks)
- 6 a. What are the principles of agile methods of software development? (10 Marks)
b. What are advantages of pair programming? (05 Marks)
c. What is software prototyping? What are its benefits? (05 Marks)
- 7 a. Differentiate between verification and validation. (05 Marks)
b. Explain the concept of clean room software development. (05 Marks)
c. What is equivalence partitioning? Explain with an example how equivalence partitioning helps in testing. (10 Marks)
- 8 a. Write a short note on P-CMM. (05 Marks)
b. How is COCOMO used to estimate the cost of a software? (10 Marks)
c. Write a note on project staffing. (05 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.