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Seventh Semester B.E. Degree Examination, June 2012

Software Architecture

Time: 3 hrs.

Max. Marks:100

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

PART – A

- 1 a. Define software architecture. What is architecture business cycle? Explain with a neat diagram. (10 Marks)
- b. Define architectural patterns, reference models and reference architectures and bring out the relationships between them. (06 Marks)
- c. Explain the various process recommendations as used by an architect while developing software architectures. (04 Marks)
- 2 a. Explain the process control paradigm with various process control definitions. (06 Marks)
- b. List the basic requirements for mobile robot architecture. (04 Marks)
- c. Explain the process control view of cruise control architectural style and obtain the complete cruise control system. (10 Marks)
- 3 a. What is quality attribute scenario? List the parts of scenario, with an example. (04 Marks)
- b. What is availability? Explain the general scenario for availability. (08 Marks)
- c. Classify security tactics. What are the different tactics for resisting attacks? (08 Marks)
- 4 a. List the components of pipe and filters architectural pattern. With sketches, explain the CRC cards for the same. (08 Marks)
- b. Define blackboard architectural pattern. Briefly explain the steps used to implement the blackboard pattern. (08 Marks)
- c. Write a note on the Hearsay – II system. (04 Marks)

PART – B

- 5 a. Define broker architectural pattern. Explain with a diagram the objects involved in a broker system. (07 Marks)
- b. Depict the dynamic behavior of MVC with any one scenario. (07 Marks)
- c. Give the CRC cards for top level, intermediate level and bottom level PAC agents. (06 Marks)
- 6 a. What are the steps involved in implementing the microkernel system? (08 Marks)
- b. Explain the known uses of reflection pattern. (06 Marks)
- c. Explain the advantages and disadvantages of a reflective architectural pattern. (06 Marks)
- 7 a. Briefly explain the benefits of master slave design pattern. (06 Marks)
- b. What are variants of proxy pattern? (06 Marks)
- c. List and explain the steps to implement a whole part structure. (08 Marks)
- 8 a. List the steps of ADD method of architectural design. (06 Marks)
- b. Explain with a neat diagram, the evolutionary delivery life cycle model. (06 Marks)
- c. What are the suggested standard organization points for view documentation? (08 Marks)

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