

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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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.