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Seventh Semester B.E. Degree Examination, Dec.09/Jan.10

Software Architecture

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 is a architecture business cycle? (07 Marks)
 - b. Why is software architecture important? (03 Marks)
 - c. List all the common software architecture structures. Explain the component connector structure. (10 Marks)

2.
 - a. Explain the architecture styles based on :
 - i) Data abstraction and object-oriented organization (10 Marks)
 - ii) Event-based, implicit invocation (04 Marks)
 - b. What are the basic requirements for mobile robot architecture? (06 Marks)
 - c. Explain the control loop solution for a mobile robot.

3.
 - a. What is availability? Explain the general scenario for availability. (10 Marks)
 - b. Classify security tactics. What are the different tactics for resisting attacks? (10 Marks)

4.
 - a. With neat diagrams, depict the dynamic behaviour of pipes and filters pattern. (10 Marks)
 - b. What are the benefits of a layered pattern? (04 Marks)
 - c. Give the structure of blackboard with CRC cards. (06 Marks)

PART - B

5.
 - a. Explain the variants of broker architecture. (10 Marks)
 - b. Depict the dynamic behavior of MVC; with any one scenario. (05 Marks)
 - c. Give the CRC cards for top level, intermediate level and bottom level PAC agents. (05 Marks)

6.
 - a. Explain the benefits and liabilities of microkernel pattern. (10 Marks)
 - b. Enumerate the implementation steps of reflection pattern. (10 Marks)

7.
 - a. Give the structure of whole port design pattern with CRC. (05 Marks)
 - b. What are the application areas of master slave pattern? (10 Marks)
 - c. What are the variants of proxy pattern? (05 Marks)

8.
 - a. What are the three steps for choosing views for a project? (06 Marks)
 - b. Write a note on view catalog. (04 Marks)
 - c. What are the options for representing connectors and systems in UML? (10 Marks)

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