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06IS72

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
      ii) Event-based, implicit invocation (10 Marks)
   b. What are the basic requirements for mobile robot architecture? (04 Marks)
   c. Explain the control loop solution for a mobile robot. (06 Marks)

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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06IS72

Seventh Semester B.E. Degree Examination, May/June 2010
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. Define software architecture. Explain the common software architecture structures.
   (10 Marks)

   b. Explain how the architecture business cycle works, with a neat diagram. **(10 Marks)**

2 a. Define architectural style. Mention any four commonly used styles. **(04 Marks)**

   b. Consider the case study of building a software controlled mobile robot. Describe its challenging problems and design considerations with four requirements. Finally give the solution by layered architecture for all the four requirements. **(16 Marks)**

3 a. What are the qualities of the system? Explain the modifiability general scenario. **(10 Marks)**

   b. What do you mean by tactics? Explain the availability tactics, with a neat diagram. **(10 Marks)**

4 a. What do you mean by architectural patterns? How is it catogorised? Explain the structure part of the solution for ISO layed architecture. **(10 Marks)**

   b. Explain with a neat diagram, the dynamic scenario of passive filters. **(10 Marks)**

PART – B

5 a. What do you mean by broker architecture? What are the steps involved in implementing distributed broker architecture patterns? **(10 Marks)**

   b. Explain with a neat diagram, the dynamic scenarios of model view controller(MVC).
   (10 Marks)

6 a. What are the steps involved in implementing the microkernel system? **(12 Marks)**

   b. What are the benefits and liabilities of reflection architecture patterns? **(08 Marks)**

7 a. Discuss the five steps implementation of master slave pattern. **(10 Marks)**

   b. Define proxi design pattern. Discuss the benefits and liabilities of the same. **(10 Marks)**

8 a. Explain with a neat diagram, the evolutionary delivery life cycle model. **(08 Marks)**

   b. What are the suggested standard organization points for interface documentation? **(12 Marks)**

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