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10MCA546

Fifth Semester MCA Degree Examination, December 2012
Software Architectures

Time: 3 hrs.

Max. Marks:100

Note: Answer any FIVE full questions.

- 1 a. Describe the activities involved in creating a software architecture. (10 Marks)
b. Why is software architecture important during early design decisions of building a system? (10 Marks)
- 2 a. Explain the following architectural styles : i) Pipes and Filters ii) Layered system
iii) Repositories iv) Interpreters. (10 Marks)
b. Define keyword in context problem. Discuss on any two architectural solutions for KWIC. (10 Marks)
- 3 a. What are the parts of a quality attribute scenario? How can it be applied for modifiability quality attribute? (10 Marks)
b. Define Tactics. How do you use it to achieve security requirements in the architecture? (10 Marks)
- 4 a. How do you implement a layered architectural pattern? Explain any two known uses of layers. (10 Marks)
b. What are the components of the pipes and filter pattern? Describe them with the CRC structure. (10 Marks)
- 5 a. Give a note on the broker architectural pattern for distributed software systems. What are the benefits and liabilities of the broker architecture? (10 Marks)
b. What is Presentation – Abstraction control architectural pattern? What are the steps to be implement a PAC architecture? (10 Marks)
- 6 a. Discuss on the participating components of a microkernel pattern. Give any three benefits of this pattern. (10 Marks)
b. Explain the guidelines to implement the reflection architectural pattern. (10 Marks)
- 7 a. Explain the three variants where the Master – Slave pattern can be applied. What are the benefits of Master – Slave pattern? (10 Marks)
b. Give a description on the structure and implementation of Proxy design pattern. (10 Marks)
- 8 a. What are the steps performed by ADD approach to design an architecture? (10 Marks)
b. How do you document a view? (10 Marks)

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.