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10IS81

**Eighth Semester B.E. Degree Examination, June/July 2017**  
**Software Architectures**

Time: 3 hrs.

Max. Marks:100

**Note: Answer any FIVE full questions, selecting  
atleast TWO questions from each part.**

**PART – A**

- 1 a. Define software architecture. Explain the importance of software architecture in brief. (07 Marks)
- b. Explain the various activities that are involved in developing software based on architecture. (07 Marks)
- c. Define architectural patterns, reference models and reference architectures. Briefly explain relationships between them. (06 Marks)
- 2 a. Enlist different architecture styles. Discuss in brief pipes and filters and implicit invocation architectural styles. (07 Marks)
- b. Explain the various design changes that need to be considered in the KWIC case study. (05 Marks)
- c. Identify the various inputs and outputs of cruise-control system and explain the control architecture for cruise control. (08 Marks)
- 3 a. Explain quality attribute scenarios. (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. Explain the structure of pipes and filters patterns with CRC cards. (08 Marks)
- b. What are the benefits of layered patterns? (04 Marks)
- c. Enumerate the implementation steps of blackboard architectural pattern. (08 Marks)

**PART – B**

- 5 a. Identify the components involved in broker architecture. Explain the responsibilities of each component. (08 Marks)
- b. Explain the dynamic behavior of MVC pattern with one scenario. (08 Marks)
- c. List the benefits of PAC pattern. (04 Marks)
- 6 a. Explain the structural part of microkernel architectural pattern. (08 Marks)
- b. List the forces associated with the problem of reflection system. (06 Marks)
- c. Explain the benefits of reflection patterns. (06 Marks)
- 7 a. Give the structure of whole part design pattern with CRC. (07 Marks)
- b. What are the application areas of master slave pattern? (06 Marks)
- c. List the known uses and liabilities of proxy pattern. (07 Marks)
- 8 a. List the 3 steps of choosing views for a project. (05 Marks)
- b. Write a note on ADD and its steps. (10 Marks)
- c. List the steps in documenting a view for architecture. (05 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.