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10IS81

Eighth Semester B.E. Degree Examination, Dec.2015/Jan.2016
Software Architecture

Time: 3 hrs.

Max. Marks:100

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

PART – A

- 1
 - a. Explain how the software architecture affects the factors of influence. Hence or otherwise explain ABC. (08 Marks)
 - b. Briefly explain the technical importance of software architecture. Further elaborate on the fact that architecture is the vehicle for stakeholder communication. (07 Marks)
 - c. What is an allocation structure as applied to software architecture? Explain the three allocation structure in practice. (05 Marks)
- 2
 - a. Discuss the invariants, advantages and disadvantages of pipes and filter architecture style. (10 Marks)
 - b. State the problem of KWIC. Propose implicit invocation and pipes and filter style to implement a solution for the same. (10 Marks)
- 3
 - a. What is quality attribute scenario? List the parts of such a scenario. Distinguish between availability scenario and modifiability scenario. (10 Marks)
 - b. Explain how faults are detected and prevented. (05 Marks)
 - c. Write a brief note on design time tactics. (05 Marks)
- 4
 - a. Discuss the guidelines involved in the implementation of pipes and filter architecture. (10 Marks)
 - b. Write the context, problem and the solution part of blackboard architectural pattern. (10 Marks)

PART – B

- 5
 - a. What is the necessity of proxies and bridge components in a broker system? Explain. (06 Marks)
 - b. Explain the possible dynamic behavior of MVC pattern with suitable sketches. (09 Marks)
 - c. Highlight the limitations of PAC pattern. (05 Marks)
- 6
 - a. Explain in brief the components comprising the structure of microkernel architectural pattern. (10 Marks)
 - b. Explain the known uses of reflection pattern. (10 Marks)
- 7
 - a. Briefly explain the benefits of master slave design pattern. (06 Marks)
 - b. List and explain the steps to implement a whole part structure. (08 Marks)
 - c. With neat sketch, explain the typical dynamic scenario of a proxy structure. (06 Marks)
- 8
 - a. List the steps of ADD. (04 Marks)
 - b. Write a note on creating a skeletal system. (06 Marks)
 - c. What are the uses of architectural documentation? Bring out the concept of view as applied to architectural documentation. (10 Marks)

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Important Note : 1. On completing your answers, carefully 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, must be treated as malpractice.