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Eighth Semester B.E. Degree Examination, Dec.2019/Jan.2020
Software Architecture

Time: 3 hrs.

Max. Marks:100

**Note: Answer FIVE full questions, selecting
at least TWO questions from each part.**

PART – A

- 1 a. Define software architecture. What is a architecture business cycle? Explain with a neat diagram. (08 Marks)
- b. Explain the various process recommendations as used by an architect while developing software architectures. (06 Marks)
- c. Define architectural model, reference model, reference architecture and bring out the relationship between them. (06 Marks)
- 2 a. Explain the process control paradigm with various process control definitions. (08 Marks)
- b. What are the basic requirements for a mobile robot's architecture? How the implicit invocation model handles them? (08 Marks)
- c. Write a note on heterogeneous architectures. (04 Marks)
- 3 a. Briefly explain the testability tactics. (07 Marks)
- b. What are the qualities of the system? Explain the modifiability general scenario. (07 Marks)
- c. Explain how faults are detected and prevented, using availability tactics. (06 Marks)
- 4 a. List and explain the benefits and liabilities of pipes and filters pattern. (08 Marks)
- b. Define architectural pattern for blackboard. Briefly explain the steps to implement the blackboard architectural pattern. (08 Marks)
- c. Write a short note on HEARSAY – II system. (04 Marks)

PART – B

- 5 a. What do you mean by broker architecture? What are the steps involved in implementing distributed broker architecture patterns. (08 Marks)
- b. Give the CRC cards for top level, intermediate level and bottom level PAC-agents. Highlight the limitations of PAC pattern. (08 Marks)
- c. Depict the dynamic behavior of MVC, with any one scenario. (04 Marks)
- 6 a. Discuss the benefits and liabilities of reflection architectural pattern and also highlight the known uses of reflection architectural pattern. (07 Marks)
- b. Explain in brief, the components comprising the structure of microkernel architectural pattern with OMT (Object Modeling Technique) diagram. Also draw the CRC cards for each component. (08 Marks)
- c. Explain the steps involved in implementing the Microkernel system. (05 Marks)
- 7 a. With a neat sketch, explain the typical dynamic scenario of a proxy structure. Highlight the consequences of proxy structure. (07 Marks)
- b. List and explain the steps to implement whole part structure. (07 Marks)
- c. Give the structure of master slave design pattern with CRC. And discuss the variants of master slave design pattern. (06 Marks)
- 8 a. Explain with a neat diagram, the evolutionary delivery life cycle model. (07 Marks)
- b. Briefly explain the different steps performed while designing an architecture using the ADD method. (07 Marks)
- c. Explain the three step procedure for choosing the views for your project. (06 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.