

## Fifth Semester MCA Degree Examination, July/August 2022 Software Architecture

Time: 3 hrs.

Max. Marks: 100

*Note: Answer any FIVE full questions, choosing ONE full question from each module.*

### Module-1

- 1 a. What are the three kinds of structures involved in architectural design? Discuss. (06 Marks)
- b. What makes good architecture? (10 Marks)
- c. How a system's quality attributes can be enabled? (04 Marks)

OR

- 2 a. Explain the role of software architecture in early design decisions. (05 Marks)
- b. Discuss the implications of architecture in a Project-Life-Cycle. (08 Marks)
- c. Describe the influence of stakeholders on the architect. (07 Marks)

### Module-2

- 3 a. How quality attributes can be achieved through tactics? (08 Marks)
- b. Discuss the general scenario with respect to availability. (08 Marks)
- c. Describe the taxonomy of systems of systems. (04 Marks)

OR

- 4 a. Explain the modifiability tactics. (10 Marks)
- b. Discuss the general scenario of testability and usability. (10 Marks)

### Module-3

- 5 a. How performance of a model is analyzed? Explain. (10 Marks)
- b. Discuss the role of Thought Experiments and Back-of-the-Envelope analysis in modeling the architecture. (10 Marks)

OR

- 6 a. Explain the guidelines for the Agile Architect. (10 Marks)
- b. How ASRs are gathered by interviewing stakeholders? (10 Marks)

### Module-4

- 7 a. How architecture design is done using generate and test process? (10 Marks)
- b. Explain the steps of Attribute Driver Design method. (10 Marks)

OR

- 8 a. What is Module View? Explain the same with respect to its properties. (10 Marks)
- b. How views are chosen? Discuss. (10 Marks)

### Module-5

- 9 a. Explain the concept of Mud to structure with respect to layers. (10 Marks)
- b. How pipes and filters architecture is implemented? Discuss. (10 Marks)

OR

- 10 a. Explain the steps involved in implementing Broker Pattern. (10 Marks)
- b. Discuss about model view controller architecture pattern. (10 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.