

# CBCS SCHEME

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16/17MCA443

## Fourth Semester MCA Degree Examination, Dec.2019/Jan.2020 Software Architecture

Time: 3 hrs.

Max. Marks: 80

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

### Module-1

- 1 a. Explain the concept of Architecture Business Cycle in detail. (08 Marks)  
b. What are the different factors which influence the architecture of an organization? (08 Marks)

OR

- 2 a. Explain why software architecture is important. (08 Marks)  
b. Explain software architecture in project life-cycle context. (08 Marks)

### Module-2

- 3 a. Explain availability quality attribute with the help of general scenario? (08 Marks)  
b. What do you mean by tactics? Explain security tactic with proper diagram. (08 Marks)

OR

- 4 a. Explain the categories of design decision. (08 Marks)  
b. What are the parts of a quality attribute scenario? How can it be applied for modifiability? (08 Marks)

### Module-3

- 5 a. Discuss on quality attribute checklist through experiments and back of the envelope analysis. (08 Marks)  
b. Explain the means of identifying ASRs. (08 Marks)

OR

- 6 a. Explain the business Goals and an Architecture with a diagram. (08 Marks)  
b. Explain the analysis of quality attribute performance. (08 Marks)

### Module-4

- 7 a. Explain Attribute Driven Design (ADD) and the steps involved in ADD process (08 Marks)  
b. What are the techniques which help to keep the implementation code and the architecture consistent? (08 Marks)

OR

- 8 a. Explain the test activities and the architect's role in testing. (08 Marks)  
b. Explain the component-and-connector view in documenting software architecture. (08 Marks)

### Module-5

- 9 a. Discuss the structure of model-view-controller pattern. (08 Marks)  
b. Explain the broker architectural pattern. (08 Marks)

OR

- 10 a. Discuss pattern classification with suitable example. (08 Marks)  
b. Explain blackboard architectural pattern with a neat diagram. (08 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.