



Fifth Semester MCA Degree Examination, June/July 2024
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. Define software architecture and also discuss why software architecture is important. (06 Marks)
b. Explain the influence of architecture with respect to system stake holder. (08 Marks)
c. What is architecture business cycle? Explain with diagram. (06 Marks)

OR

- 2 a. Describe the technical context of an architecture. (10 Marks)
b. Explain the guiding quality design decisions in detail. (10 Marks)

Module-2

- 3 a. What is the relationship among reference models, architectural patterns, reference architecture and software architecture? (12 Marks)
b. List the parts of quality attribute scenario with a neat diagram. (08 Marks)

OR

- 4 a. What is functionality? Does the functionality determine architecture or not? Explain. (10 Marks)
b. Discuss the general scenario with respect to availability. (10 Marks)

Module-3

- 5 a. How availability can be analyzed in modeling the architecture? (10 Marks)
b. Discuss about thought experiments and back-of-the-envelope analysis. (10 Marks)

OR

- 6 a. How ASR are gathered by interviewing stake holders? (10 Marks)
b. Explain the role of business goals in architecturally significant requirements. (10 Marks)

Module-4

- 7 a. Briefly discuss the steps involved in attribute driven design method. (10 Marks)
b. Define view. Explain the role of module view in software architecture. (10 Marks)

OR

- 8 a. Discuss the sections of documentation beyond views. (10 Marks)
b. How an architecture is documented in agile development project? (10 Marks)

Module-5

- 9 a. Explain layers architectural pattern. (10 Marks)
b. Write a short note on pipe and filters. (10 Marks)

OR

- 10 a. Explain blackboard architectural pattern. (10 Marks)
b. Explain broker architectural pattern. (10 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.