USN | | | | | | | | | | **10IS81**

Eighth Semester B.E. Degree Examination, June/July 2023

Software Architecture

Time: 3 hrs.   Max. Marks:100

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

PART – A

1 a. What is software process? List and explain architectural activities.   (10 Marks)
   b. Explain software architectural structures.   (10 Marks)

2 a. Explain architectural styles based on:
       (i) Layered systems
       (ii) Process control   (10 Marks)
   b. Explain four architectural design solutions for KWIC system with diagram.   (10 Marks)

3 a. Explain Usability General Scenario.   (06 Marks)
   b. What are the business quality goals for system architecture?   (04 Marks)
   c. What do you mean by tactics? Explain security tactic with neat diagram.   (10 Marks)

4 a. Explain the benefits of layer pattern.   (04 Marks)
   b. Explain structure of blackboard with CRC,   (06 Marks)
   c. Explain the structure solution of processing data streams with respect to pipes and filters architectural pattern.   (10 Marks)

PART – B

5 a. What is a broker? Explain structure solution of distributed broker architectural pattern.
                                                                                    (10 Marks)
   b. Explain the step by step procedure to implement PAC architecture.   (10 Marks)

6 a. Explain two scenario that demonstrates dynamic behaviour of a microkernel system for interprocess communication.   (10 Marks)
   b. List and explain the implementation details of a reflection architecture.   (10 Marks)

7 a. What are the design patterns that support the structural decomposition? Explain them.
                                                                                    (06 Marks)
   b. Explain liabilities of Master-Slave design pattern.   (04 Marks)
   c. Explain dynamic scenario of proxy pattern with implementation steps.   (10 Marks)

8 a. Explain the steps performed when designing an architecture using ADD method. (10 Marks)
   b. Explain the major aspects of cross-view documentation.   (10 Marks)

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