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)**

* * * * *