USN ☐☐☐☐☐☐☐☐☐☐

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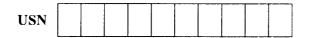## Eighth Semester B.E. Degree Examination, June/July 2018
Software Architectures

Time: 3 hrs.

Max. Marks:100

Note: *Answer any FIVE full questions, selecting*
atleast TWO questions from each part.

PART – A

1   a. Define software architecture. Explain the factors that influence software architecture.
      (10 Marks)
    b. Explain the importance of software architecture and its uses. (10 Marks)

2   a. Write short notes on layered systems. (05 Marks)
    b. Explain the working of pipes and filters. (08 Marks)
    c. Elaborate on the case study "Keyword in context". (07 Marks)

3   a. Explain security quality attribute scenario along with its properties. (10 Marks)
    b. Explain the tactics used to achieve the quality attribute "Availability". (10 Marks)

4   a. Write short notes on the architectural pattern category "From mud to structure" and
      elaborate on the layers patterns with the three part schema with an example. (10 Marks)
    b. Mention the advantages and disadvantages of pipes and filters pattern as well as blackboard
      pattern. (10 Marks)

PART – B

5   a. Explain the 3-part schema of Broken pattern. (06 Marks)
    b. Explain any one dynamic scenario of MVC pattern. (08 Marks)
    c. Mention the advantages and disadvantages of PAC pattern. (06 Marks)

6   a. List and explain the components of microkernel pattern. (10 Marks)
    b. Explain the 3-partschema of reflection pattern. (06 Marks)
    c. Mention any two advantages and disadvantages of reflection pattern. (04 Marks)

7   a. Elaborate on the implementation of Whole-Part structure. (07 Marks)
    b. Explain the dynamics of Master-Slave pattern. (08 Marks)
    c. Mention the benefits and liabilities of Proxy design pattern. (05 Marks)

8   a. List and explain in detail on the ADD steps. (10 Marks)
    b. Narrate any 5 uses of architectural documentation. (05 Marks)
    c. Write short notes on documentation across views. (05 Marks)

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