U.S.N

P.E.S. College of Engineering, Mandya - 571 401

(An Autonomous Institution affiliated to VTU, Belagavi)

Second Semester, M. Tech - Computer Science and Engineering (MCSE)

Semester End Examination; June - 2017

Software Architecture

Time: 3 hrs *Max. Marks: 100*

*Note: Answer **FIVE** full questions, selecting **ONE** full question from each unit.*

UNIT - I

1 a. Explain in detail the building of Architectural Business cycle by identifying the factors of influence. 10

b. Explain the following in brief :

i) Architectural model

ii) Reference model 10

iii) Reference architecture.

2 a. Discuss invariants, advantages and disadvantages of pipes and fitters architectural style. 10

b. Explain the architectural styles based on:

i) Data abstraction and object oriented organization 10

ii) Event based implicit invocation.

UNIT - II

3 a. What is a quality attribute scenario? List the parts of such scenario; distinguish between availability and modifiability scenario. 10

b. Explain performance and usability scenarios in brief. 10

4 a. What is a Tactics? List and explain any two types of tactics. 10

b. Explain the following :

i) Resource demand 10

ii) Resource arbitration.

UNIT - III

5 a. List the components of a pipe and filters architectural pattern. With sketches, explain the CRC cards for the same. 10

b. Discuss the 3-part schema which underlies the layers Architectural patterns. 10

6 a. What is the necessity of proxies and bridge components in a broker system? Explain. 10

b. Explain the dynamics of presentation-abstraction-control pattern with sketches. 10

UNIT - IV

7 a. Explain in brief the participating components of microkernel pattern. 10

b. Discuss the dynamics of reflection pattern with sketches. 10

8 a. List and explain the steps to implement a whole-part structure.   10

   b. Briefly explain the benefits of Master-Slave pattern.   6

   c. What are variants of proxy pattern?   4

UNIT - V

9 a. Explain with diagram, evolutionary delivery lifecycle model.   10

   b. List the steps of ADD method and explain any two in brief.   10

10 a. Discuss with a diagram different ways of documenting a view. Explain with a diagram.   15

   b. Explain the template for documenting interfaces.   5

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