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# MSE - 103

## M.E./M.Tech., I Semester

Examination, June 2014

## Software Engineering

*Time : Three Hours*

*Maximum Marks : 70*

*Note :* i)  Attempt one question from each unit.

ii)  Each unit have equal marks.

iii)  Assume Data/Value if required.

## Unit - I

1. a)  Differentiate between a software product and a software process. 7

   b)  What are the distinct steps in requirement engineering process? Draw the spiral model of it. 7

### OR

2. a)  Explain five desirable characteristics of good SRS document. 7

   b)  What is software engineering paradigm? Compare the advantages and disadvantages of various software engineering paradigms. 7

## Unit - II

3. a)  State and explain the various goals of the UML. 7

   b)  Explain the manner in which use cases can be used for the purpose of testing. 7

### OR

4. a)  What is data modeling? What is the importance of entity relationship diagram in it? 7

   b)  Explain about data dictionary. 7

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## Unit - III

5. a)  Describe clearly how a good design is influenced by the cohesion and coupling. 7

   b)  What in your understanding, should be recorded in a software design document? What is the use of software design document? 7

### OR

6.  Write short note on : 14

   a)  User Interface Design.

   b)  Component Level Design.

## Unit - IV

7. a)  What is the difference between validation and verification of software? Explain how their failure can be avoided. 7

   b)  Explain integration testing. What are the steps for top down integration? What problems may be encountered when top down integration is chosen? 7

### OR

8.  Write short note on : 14

   a)  Formal Technical Review.

   b)  Orthogonal Array Testing.

## Unit - V

9. a)  What is the basis of Halstead metrics to calculate the size of a software? 7

   b)  Explain Mc Call's quality factors. 7

### OR

10.  Write short notes on : 14

   a)  LOC.

   b)  Component level design metrics.

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