

Roll No

MSE - 103
M.E./M.Tech., I Semester
 Examination, December 2015
Software Engineering

Time : Three Hours

Maximum Marks : 70

Note : Attempt any five questions. All questions carry equal marks.

1. a) What do you mean by System Engineering? Elaborate the System Engineering Process with suitable diagram.
 b) Explain why it is important to produce an overall description of a system architecture at an early stage in the system specification process?
2. a) What are the crucial process steps of Requirement Engineering? Also discuss the significance and use of requirement engineering using suitable example.
 b) Describe key elements of Analysis Modeling. Also discuss Data Modeling in brief.
3. a) Model the Data Processing which might take place in an electronic mail system. You should model the mail-sending and mail-receiving processing separately.
 b) Explain the term USE CASE Modeling; also describe UML Scenario by taking one suitable example.

4. a) Discuss the objectives of Software Design. How do we transform an informal design to a detailed design? Justify your answer by suitable example.
 b) What is Modularity? Explain Coupling and its various types using suitable sketch.
5. a) Why are control components necessary in traditional software and generally not required in object-oriented system? Justify your answer by suitable example.
 b) Describe the steps involved in User Interface Design Model using proper example.
6. a) What is Software Testing? Discuss the role of Software testing during software life cycle and why is it so difficult?
 b) Explain the Boundary Value Analysis testing technique with the help of an example.
7. Explain the following:
 - i) Formal Technical Review
 - ii) Integration Testing and Validation Testing
 - iii) FURPS
 - iv) McCall's Quality Model
8. a) What are software metrics? Also explain metrics for analysis model using suitable example.
 b) Explain component level design and interface level design metrics using proper example.
