

**T.E. 2008 (Software Engineering)**

**(Semester - I)**

**Time: 3 Hours**

**Max. Marks : 100**

**Instructions to the candidates:**

- 1) **Answers to the two sections should be written in separate answer books.**
- 2) **Answer any three questions from each section.**
- 3) **Neat diagrams must be drawn wherever necessary.**
- 4) **Figures to the right side indicate full marks.**
- 5) **Use of Calculator is allowed.**
- 6) **Assume Suitable data if necessary**

**SECTION I**

- Q1) a) Software Engineering is considered as layered technology. Comment [9]  
b) Explain Agile Process Model. [9]

**OR**

- Q2) a) What is software process model? Explain RAD model [9]  
b) Explain in detail Personal and Team process model [9]
- Q3) a) Explain Domain analysis. Discuss in short Data objects, cardinality and modularity in data models. [8]  
b) What is meant by normal and exciting requirements? How requirements are validates? [8]

**OR**

- Q4) a) Draw level 0, level 1, and level 2 data flow diagram for Railway reservation system. System keeps the track of ticket booking, ticket cancellation for the passengers. The system generates a report of the revenue collection for each train. [8]  
b) What is meant by requirement specifications? What are the characteristics that requirement must meet? [8]

**OR**

- Q5) a) What is Design pattern? How patterns used and designed? [8]  
b) Explain the following architectural styles: 1. Data centered architecture 2. Data flow architecture [8]

**OR**

- Q6) a) Explain various steps for User Interface Design. [8]  
b) Explain Web Design Pyramid. What are Interface Design Principles for web applications? [8]

**SECTION II**

- Q7) a) What are strategic issues in software testing? Explain in brief: 1. Recovery testing [8]  
2. Performance testing  
b) What is difference between verification and validation testing? [4]  
c) Define Cyclomatic Complexity. What are the three ways to calculate it? [4]

**OR**

- Q8) a) What is black box testing? What are the ways to perform black box testing? [8]  
b) What is difference between testing and debugging? Explain in detail debugging [8]

- process.
- Q9) a) Explain size oriented metric. What data should we collect to derive size oriented metric? [4]  
b) What do you mean by DRE? What is the significance of DRE in maintaining software quality? [4]  
c) Explain the COCOMO-II estimation model. [8]
- OR**
- Q 10) a) What is the objective of software measurement? Explain the LOC based software estimation in brief. [8]  
b) Explain the 4P's involved in software project management. Explain the W5HH principles [8]
- Q 11) a) What is RMMM? Explain in detail. [9]  
b) What is project scheduling? What are basic principles of project scheduling? [9]
- OR**
- Q12) Write short note on : [18]  
1. Software configuration management  
2. Software quality assurance  
3. Change control process

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