

(Following Paper ID and Roll No. to be filled in your Answer Book)

**PAPER ID : 0114**

Roll No.

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**B.Tech.**

**(SEMESTER-IV) THEORY EXAMINATION, 2011-12**

**SOFTWARE ENGINEERING**

**Time : 3 Hours ]**

**[ Total Marks : 100**

**Note : Answer all questions as directed.**

**Section – A**

1. Attempt all questions :

**10 × 2 = 20**

- What do you understand by software crisis ?
- Comment on the statement “software does not wear out”.
- List out requirements elicitation techniques.
- What are the linkages between data flow and E-R diagrams ?
- What are the objectives of architectural design ?
- What do you mean by abstraction ?
- What is the main weakness of white box testing techniques ?
- What do you understand by the terms error and fault ?
- List the types of software maintenance.
- What is the need of software maintenance ?

**Section – B**

2. Attempt any three parts.

**3 × 10 = 30**

- What is a prototype model ? Under what circumstances is it beneficial to construct a prototype model ?
- Explain in detail the SEI capability maturity model (SEI-CMM) ? Also differentiate it with ISO.
- What do you mean by the term cohesion ? Explain different types of cohesion.
- What are test plans and test cases ? Illustrate it by an example.
- What are the various software re-engineering activities ? Discuss.

**Section – C**

Attempt **all** questions.

**5 × 10 = 50**

3. Explain in detail various cycles of spiral model. Also state advantages and disadvantages of this model.

**OR**

Define software engineering. Explain in brief about evolution of software.

4. What is SRS ? Who are the different categories of uses of the SRS document ? What are their expectations from the SRS document ?

**OR**

What do you understand by quality of software ? Explain the role and responsibility of QA group in the software organization.

5. Explain the principles of design and different concepts used in design of large software.

**OR**

Discuss the major advantages of object-oriented design approach over the function-oriented design approach.

6. What are the Top-down and Bottom-up integration testing ? Explain with example.

**OR**

Define Testability. Differentiate Alpha testing, Beta testing and System testing.

7. Write short notes on any **two** of the following :

**2 × 5 = 10**

- (a) Constructive cost models
  - (b) Software risk
  - (c) Overview of CASE tools
  - (d) Software version control
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