



**T.E. (Information Technology) (Semester – I) Examination, 2010**  
**SOFTWARE ENGINEERING (New)**  
**(2008 Course)**

Time : 3 Hours

Max. Marks : 100

- Instructions:** 1) Answers to the **two** Sections should be written in **separate** answer books.  
2) From Section I answer Q. 1 or Q. 2, Q. 3 or Q. 4, Q. 5 or Q. 6 and answer Q. 7 or Q. 8, Q. 9 or Q. 10, Q. 11 or Q. 12 from Section II.  
3) Neat diagrams must be drawn **wherever** necessary.  
4) Figures to the **right** indicate **full** marks.

**SECTION – I**

1. a) Define software engineering. List the characteristics of software. **6**
- b) State and explain the customer's myths. **4**
- c) Explain the incremental software process model in detail. **8**

**OR**

2. a) Explain the software process framework activities in brief. **10**
- b) Explain the Unified Processing model in detail. **8**
3. a) Explain the requirement elicitation and requirement elaboration tasks in brief. **10**
- b) Draw and explain the traceability table for requirement management. **6**

**OR**

4. a) Explain the scenario based elements of analysis model in detail. **8**
- b) Draw a level 0, level 1 and level 2 DFD for a library book issuing system for a college student. **(1+2+5=8)**
5. a) In the context of software design explain the following in brief : **(4×2=8)**
  - i) Modularity
  - ii) Functional independence.
- b) Explain the layered architecture style in detail. **8**

**OR**



6. a) In the context of software design explain the following in brief : (4×2=8)
- Information hiding
  - Refactoring.
- b) What are the steps involved in user interface design ? How is the interface evaluation done ? 8

### SECTION – II

7. a) What are the objectives of unit testing ? How is unit testing carried out ? 6
- b) What is basis path testing ? What is cyclomatic complexity ? How is it determined for a flow graph ? Illustrate with an example. 10

OR

8. a) What is bottom up integration testing ? How is that carried out ? 8
- b) What is unit testing and integration testing in object oriented context ? 8
9. a) What questions need to be answered in order to develop a project plan using W<sup>5</sup>HH principles ? 8
- b) What is objective of software measurement ? What are the software estimation techniques based on problem decomposition ? Explain any one in brief. 8

OR

10. a) What is OO metric ? 8
- b) Explain the COCOMOII estimation model. 8
11. a) What is a risk ? What are the types of software risks ? Write two examples of each. 6
- b) What is RMMM ? Write a note on it. 10

OR

12. a) What is project scheduling ? What are the basic principles of project scheduling ? 8
- b) Define SCM. What are the contents of SCM repository ? 8