

Tribhuvan University  
**Institute of Science and Technology**  
2072

Bachelor Level/ Third Year/ Six Semester/ Science  
**Computer Science and Information Technology**  
**(CSc. 351) (Software Engineering)**

Full Marks: 60  
Pass Marks: 24  
Time: 3 hours

*Candidates are required to give their answers in their own words as far as practicable. The questions are of equal value.*

**Attempt any ten questions.**

(10x6=60)

1. Define software. Discuss system modeling with suitable example.
2. Why do we need software process model? Discuss reuse-oriented development in detail.
3. Discuss different types of risks which are likely to occur in software projects. Briefly explain risk analysis stage of risk management process.
4. What is requirements elicitation and analysis? Discuss.
5. Discuss different types of rapid prototyping techniques.
6. Why do we need formal specification? Discuss behavioral specification in detail.
7. Discuss different activities of architectural design along with the repository model.
8. What are control models? Differentiate between centralized control and event-based control.
9. Why do we use Use-Case diagram in object-oriented development? Draw a Use-Case diagram for an online course registration system.
10. What is clean room software development? Briefly explain verification and validation panning.
11. What is integration testing? Discuss path testing with suitable example.
12. Write short notes on:
  - a. Reverse engineering
  - b. Function point

**IOST, TU**