

## FACULTY OF INFORMATICS

B.E. 3/4 (IT) II Semester (Old) Examination, May 2013

Subject: Object Oriented System Development

Time: 3 Hours

Max. Marks: 75

*Note: Answer all questions from Part A. Answer any five questions from Part B.***PART – A** (25 Marks)

1. Define collaboration. (2)
2. What are the rules of UML? (2)
3. What is the difference between communication and synchronization? (3)
4. What are different parts of a state in state machine? (2)
5. What do you mean by basic behavioral modeling? (3)
6. Difference between processes and threads. (3)
7. What is extensibility mechanism? (2)
8. What are the responsibilities of component engineer in design? (3)
9. What is guard condition? (2)
10. What is "Domain Model"? Explain. (3)

**PART – B** (50 Marks)

- 11.(a) What are the principles of modeling? (5)
- (b) How do we model structural relationship depict with an example? (5)
- 12.(a) Discuss the following concepts of activity diagram  
(i) transition (ii) branching (iii) fork & join (iv) swimlanes (5)
- (b) Discuss what can be done for building a system that encompasses multiple flow of control. (5)
- 13.(a) What are the various kinds of diagrams that can be used to view the static and dynamic parts of a system? Explain. (6)
- (b) How do we model component diagram? (4)
- 14.(a) What is sequence diagram? How it is different from collaboration diagram? Draw state chart diagram for answering a telephone call. (7)
- (b) What is deployment diagram and when it is used? (3)
- 15.(a) Explain time and space. How do we specify timing constraints and location in behaviour modeling? (5)
- (b) What is forward and reverse engineering? (5)
- 16.(a) Discuss the role of analysis in the software life cycle. (5)
- (b) Briefly describe the responsibilities of a test engineer in the testing workflow. (5)
17. Write short notes on:
  - (a) tagged value (2)
  - (b) concurrent substate (2)
  - (c) active object (2)
  - (d) adornment (2)
  - (e) event (2)