

USN

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13MCA51

**Fifth Semester MCA Degree Examination, June/July 2018**  
**Object Oriented Modeling and Design Patterns**

Time: 3 hrs.

Max. Marks: 100

**Note: Answer any FIVE full questions.**

- 1 a. Explain object oriented themes. (06 Marks)  
 b. Discuss purposes served by model. (04 Marks)  
 c. Differentiate between association, aggregation and composition. (10 Marks)
- 2 a. Explain state diagram behavior. (10 Marks)  
 b. Explain types of concurrency supported by objects with appropriate example. (10 Marks)
- 3 a. Discuss the components of activity model with an example. (10 Marks)  
 b. Explain use case relationship with an example. (10 Marks)
- 4 a. Briefly discuss software development stages. (10 Marks)  
 b. What are the questions to be asked while preparing a problem statement? Discuss the same take ATM case study. (10 Marks)
- 5 a. Explain the steps in eliminating unnecessary attributes? Write the class diagram for ATM by adding attributes. (10 Marks)  
 b. Explain steps in constructing application class model. (10 Marks)
- 6 a. What is a library? How library should be organized so that it can be easily reused? (10 Marks)  
 b. Explain the steps in designing algorithms. (10 Marks)
- 7 a. What is a pattern? Briefly explain pattern categories. (10 Marks)  
 b. Explain structure and dynamics of client Dispatcher server pattern. (10 Marks)
- 8 Write short notes:  
 a. Operation and methods.  
 b. Association end names.  
 c. Constraints.  
 d. Batch transformation. (20 Marks)

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Important Note : 1. On completing your answers, compulsorily draw diagonal cross lines on the remaining blank pages.  
 2. Any revealing of identification, appeal to evaluator and /or equations written eg, 42+8 = 50, will be treated as malpractice.