

Roll No.

Subject Code—6818

M.C.A. (Fifth Year) EXAMINATION

(5 Years Integrated Course)

(Main/Re-appear)

MCA-503

**OBJECT ORIENTED DESIGN AND
MODELING**

Time : 3 Hours

Maximum Marks : 100

Note : Attempt any *Five* questions. All questions carry equal marks.

1. (a) What is class ? What is association between classes ? What are different types of properties of an association ? Explain each by giving suitable example. **10**
- (b) What is aggregation ? How is it different from composition ? Explain by giving examples. **10**

2. (a) What is inheritance ? Discuss different types of inheritance by giving suitable examples. 10
- (b) Comment on "Generalization as extension and restriction". 10
3. (a) What is dynamic model ? Explain event, state, activity, action and condition by giving suitable examples. 10
- (b) What is event-trace diagram ? Draw an event-trace diagram for making a phone call. 10
4. (a) What is functional model ? How is it represented ? Explain. 10
- (b) Draw a state chart for two-button simple watch. 10
5. (a) Explain the criteria to decompose a system into subsystems. How do you organize a system into partitions and layers ? 10
- (b) Explain any *two* architectural frameworks. 10
6. (a) Discuss different types of software control mechanisms. 10
- (b) Explain design and optimization of algorithms. 10
7. (a) How do you select storage for persistent objects ? Explain. 10
- (b) Explain the importance of reusability in software system development. 10
8. Write short notes on the following :
 - (a) Programming-in-the-large 10
 - (b) Meta data. 10