

MCS–219

MASTER OF COMPUTER APPLICATIONS (MCALO)

OBJECT ORIENTED ANALYSIS AND DESIGN

Time: Three Hours

Maximum Marks: 100

Note: This paper consist of three Sections. Section A is of 20 marks. Section B is of 50 marks and Section C is of 30 marks.

Section–A

Note: There are total seven questions in this Section. You have to attempt any five questions from this Section.

1. What is object oriented analysis and design?
2. What is object modeling technique (OMT)?
3. What is use case diagram? List its objectives.
4. What is a state machine? Explain.
5. What is Association? What are the different types of association?
6. Briefly explain benefits of designing class diagram.
7. What is collaboration diagram? List components of collaboration diagram.

Section–B

Note: There are total seven questions in this Section. You have to attempt any five questions from this Section.

8. What is State Chart? Explain how state chart is implemented with the help of an example.

9. Explain Three-Schema architecture with the help of diagram.
10. Explain principles of object orientation.
11. What is UML? What is class diagram? Draw class diagram for online student registration system of an university.
12. What is activity diagram? Draw activity diagram for order management system.
13. What is component diagram? Draw component diagram for online examination system.
14. What is dynamic modeling? Explain need of concurrency control in dynamic modeling with the help of an example.

### Section–C

Note: There are total three questions in this Section. You have to attempt any two questions from this Section.

15. What is DFD? Why is it required in OOAD? Explain meaning of balancing a DFD. Draw DFDs upto 2nd level for online examination system. Make necessary assumptions.
16. What is System Design ? What is coupling and cohesion ? Explain how a system is decomposed while working with a complex system with the help of an example. Briefly explain different data storage strategies used by system designer.
17. What is design optimization? Explain the points should be considered while system optimization. Also explain need of algorithm optimization with the help of an example.