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MCS–219

**MASTER OF COMPUTER
APPLICATIONS (MCA-NEW)**

Term-End Examination

December, 2023

**MCS-219 : OBJECT ORIENTED ANALYSIS AND
DESIGN**

Time : 3 Hours

Maximum Marks : 100

Note : *Question No. 1 is compulsory. Attempt any
three questions from the rest.*

1. (a) “Object Oriented Analysis and Design is better than Structured Analysis and Design.” Explain in detail. Justify the above statement. 10

P. T. O.

- (b) What is UML ? What are its advantages ?
Draw class diagram for an ATM system. 10
- (c) What is inheritance ? Explain advantages
of inheritance. 5
- (d) What is an association ? Explain use of
link in representation of association with
the help of a diagram. 5
- (e) What is design documentation ? Briefly
explain the features of a good design
documentation. 5
- (f) What is a functional model ? Which
diagram is used in functional modeling ?
Explain in brief. 5
2. (a) What is State Transition Diagram ? Draw
State Transition Diagram for an ATM
machine/system. 10

- (b) What is Generalization ? How is it different from Specialization ? Explain with an example using suitable UML diagrams. 10
3. (a) What is a constraint ? Explain how constraints are shown in a class diagram. 5
- (b) What is serialization ? Explain its use. 5
- (c) Explain the difference between unidirectional and bidirectional association. Describe how bidirectional association is implemented. 10
4. (a) What is a component diagram ? What are its advantages ? Draw component diagram for ATM system. 10
- (b) What is Aggregation ? Explain the use of aggregation in object oriented system design with the help of an example. 10

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5. Write short notes on the following : $4 \times 5 = 20$

- (a) Abstract class
- (b) Use case Diagram
- (c) Sequence Diagram
- (d) Object Class and Database Tables

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