

MCA (Revised)

Term-End Examination, 2019

MCS-032 : OBJECT ORIENTED ANALYSIS AND DESIGN

Time : 3 Hours

Maximum Marks : 100

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

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1. (a) What is Association ? Give an example of association. Also explain multiplicity in association. [5]
- (b) What is an Object ? Explain how objects communicate with each other, with the help of an example. [5]
- (c) What is use case diagram ? Draw use case diagram for online shopping system. [5]
- (d) Draw the class diagram for a Banking System which offer online banking facility for its Saving Accounts and Current Accounts customers.

Make necessary assumptions. [10]



- (e) What is object identity ? Explain its use with the help of an example. [5]
- (f) Draw activity diagram for online examination system. Make necessary assumptions. [10]
2. (a) Create class book for library management system and map it into a database table. Make necessary assumptions. [10]
- (b) What is DFD ? Draw DFD upto 2nd level for online examination system. Make necessary assumptions. [10]
3. (a) What is Inheritance ? Explain its advantages. Also explain how inheritance is readjusted by rearranging classes and operations, with the help of an example. [12]
- (b) Draw a sequence diagram for online purchase of a book. [8]
4. (a) What is Concurrency Control ? Explain need of concurrency control in object oriented system. Explain issues in concurrency control with the help of an example. [10]

(b) What is Aggregation ? Explain with the help of an example. [5]

(c) What is Abstract Class ? Explain use of abstract class with the help of an example. [5]

5. Write short notes on the followings : [4×5=20]

(a) Integrity Constraints

(b) Object Diagram

(c) Design Optimization

(d) Collaboration Diagram

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