MCS-032

MASTER OF COMPUTER APPLICATIONS (M. C. A.) (Revised) Term-End Examination December, 2020

MCS-032 : OBJECT ORIENTED ANALYSIS AND DESIGN

Time : 3 Hours   *Maximum Marks : 100*

Note : *Question number **1 is compulsory**. Attempt any **three** questions from the rest.*

1. (a) A bank offers online banking service for its Savings Account and Current Account customers. A customer may have more than one account but of different type. Customer can transfer fund online, can generate statement, can view details of transaction. Perform the following for this system (You can make necessary assumptions required) :   5×4=20

    (i) Draw class diagram.

(ii) Draw use case diagram.

(iii) Draw object diagram.

(iv) Draw data flow diagram.

(b) What is object oriented modeling ? Briefly explain the three models used for object oriented modeling. 10

(c) What is association ? Differentiate between unidirectional and bidirectional association. 5

(d) Explain the need of selecting a proper algorithm for system development. Briefly explain *three* metrices for algorithm selection. 5

2. (a) What is concurrency ? Explain, how concurrencies are identified and controlled. 10

(b) Differentiate between activity diagram and state chart diagram with the help of examples. 10

3. Discuss the following terms with suitable example/diagram : 4×5=20

(a) Collaboration diagram

(b) Aggregation

(c) Integrity constraints

(d) Encapsulation and information hiding.

4. (a) Explain, why and how a sequence diagram and collaboration diagram are used in object oriented modeling ? Give suitable example of each. 14

(b) Briefly explain the advantages of object oriented modeling. 6

5. Write short notes on the following : 4×5=20

(a) Polymorphism

(b) Serialization

(c) Persistency

(d) Object oriented analysis tools

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