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MCS-032

MCA (Revised)

Term-End Examination, 2019

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) Explain the concept of information hiding. How it is different from data encapsulation ? [5]

   (b) Compare and Contrast ODBMS and RDBMS. Give suitable example for each. [5]

   (c) How object oriented modelling differs from structured modelling ? [5]

   (d) An institution desires to develop Online Examination System. Identify the classes for the system. Draw class diagram depicting associations among classes. Make necessary assumptions wherever required. [10]

(e) How ternary associations are mapped to the tables in database ? Illustrate. [5]

(f) What do you understand by the term Serialization ? How this concept is used for management of any concurrent environment ? Discuss with suitable example. [10]

2. (a) How Usecase diagram relates to Dataflow Diagram ? How Usecase diagram specifies modular description of any system ? Discuss with suitable Usecase diagram. [10]

(b) What is DFD ? Explain its advantages. Draw a DFD for Railway Reservation system. [10]

3. (a) What is Aggregation ? Explain with the help of a suitable diagram. Justify why aggregation is called an special type of association ? [10]

(b) What is state diagram ? Discuss various notations of state diagram and use them to draw the state diagram for online examination system. [10]

4. (a) How multiple inheritance differs from multilevel inheritance ? Explain with suitable example for each. [5]

(b) What do you understand by persistency of data? Explain with an example, how persistent data is identified. [5]

(c) Compare and contrast concrete class with Abstract class. [5]

(d) Differentiate between the following : [5]

(i) Link and Association

(ii) Functional and Dynamic models.

5. Write short notes on following : [20]

(a) Activity diagram

(b) Collaboration diagram

(c) Deployment diagram

(d) Concurrency control

(e) Inheritance Adjustment

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