B4.3-R4: OBJECT ORIENTED DATABASE MANAGEMENT SYSTEMS

NOTE:
1. Answer question 1 and any FOUR from questions 2 to 7.
2. Parts of the same question should be answered together and in the same sequence.

Time: 3 Hours    Total Marks: 100

1. a) Explain how objects are integrated in relational databases?
   b) Explain ordering relationships using User Defined types (UDTs).
   c) What is the ratio of the size of CUBE(F) to the size of F if fact Table F has ten dimension attributes, each with ten different values.
   d) How inverse relationships are represented in ODL? Give an example.
   e) State the salient differences between Materialized view and database view. Explain the process of creating materialized views in databases?
   f) Define Object Type. How do you create it. Discuss with an example.
   g) State the differences between data-centric and document centric XML documents.

   (7x4)

2. a) Define inheritance relationship, composition relationship and association relationship in object oriented programming. Also provide examples for each one.
   b) State the differences between OO database and ORDBS.
   c) Discuss, with examples, OO programming concepts.

   (7+6+5)

3. a) Define object buffering? Explain how it is helpful in ODMS performance.
   b) What are the goals of object Data Management?
   c) State the differences between OO modelling and ER modelling.

   (6+6+6)

4. a) Discuss the functionality of any two semantic data models with examples.
   b) What is meant by object hierarchy? Discuss different ways of creating object hierarchy?

   (9+9)

5. a) Discuss salient features of object Query languages.
   b) Explain how the validated XML statement is different from well formed XML document. Give suitable examples.

   (9+9)

6. a) Explain how logical relationships are represented in Object databases? Discuss with an example.
   b) Define information integration. Discuss, with examples, different types of modes of information integration.

   (9+9)

7. a) Describe Object Exchange Model (OEM) for semi structure data representation. Explain its features with an example.
   b) Discuss the concept of Data Cube with an example? How is it helpful for analysis? Also explain different OLAP operations.
   c) Discuss the advantages of using friend function in operator overloading?

   (6+6+6)