

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)