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) What are the basic features of Object Oriented Programming?
b) Define the relationship between a class and an object?
c) What is the Unified Modeling Language (UML)?
d) List and brief OQL (Object Query Language) types.
e) Differentiate DBMS and OODBMS.
f) Explain Semi-Structured Data in Object Models.
g) With an example explain specialization.

(7x4)

2.

a) Explain Object Definition Language with an example. Also explain about ODL type system.
b) What is ERD (Entity Relationship Diagram)? Elaborate more with an example.

(10+8)

3.

a) Compare relationship representation in Object Oriented Data model with Relational model.
b) What do you think about the storage of objects in Object Oriented DBMS?
c) What are the components of Physical database structure of Oracle Database?

(6+6+6)

4.

a) Which are the basic elements of a Document Type Declaration (DTD)? Explain with an example.
b) Explain inheritance in Object Based database with an example.
c) Differentiate multiset and array based on Object relational database.

(6+6+6)

5.

a) Define following terms:
   i) Associations
   ii) Containment
   iii) Visibility
b) How are Large Object (LoB's) such as multimedia objects are stored in object oriented database system? Discuss with example.

(9+9)

6.

a) Describe Object Exchange Model (OEM) for semi structure data representation. Explain its features with an example.
b) State the new kind of data types supported in Object-Database System. Give an example for each and discuss how the example situation would be handled if only RDBMS were available.
c) What do you mean by operator overloading? How unary and binary operators are implemented using the member and friend functions?

(6+6+6)

7.

a) What is the difference between transient and persistence object in OOBDMS? What are the different approaches to make objects persistence?

b) Explain what is tracing level and what are the types?

c) What is an OLAP cube? Why are OLAP cubes important?

(6+6+6)