

B43-R4 : OBJECT ORIENTED DATABASE MANAGEMENT SYSTEMS

NOTE :

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

Total Time : 3 Hours

Total Marks : 100

1.
 - (a) Compare between overloading and overriding methods in object-oriented design.
 - (b) Differentiate between 'Is-a' and 'Has-a' relationship used in object-oriented design.
 - (c) 'Java supports single and multiple inheritances'- justify the statement with suitable examples.
 - (d) Why do we need object- oriented programming ? Explain its advantages.
 - (e) An object in the object-oriented model and an entity in the entity-relationship model are different from each other - Justify
 - (f) Write short note on Transaction in OODMS.
 - (g) What do you understand by pointer swizzling ? Describe the various approaches of pointer swizzling. (7x4)

2.
 - (a) What do you mean by data persistence ? Explain advantages and disadvantages of DBMS.
 - (b) Explain ER diagramming models for object-oriented approach. Also explain Booch notation for object-oriented data model.
 - (c) What is meant by nested transactions ? Discuss various operations used in nested transaction using examples. (6+6+6)

3.
 - (a) Differentiate between On Line Transaction Processing (OLTP) and On-Line Analytical Processing (OLAP) services with example.
 - (b) What is Object Management Group (OMG) reference model ? Explain the architecture of OMG reference model.
 - (c) What is data cube used in OLAP ? Explain concept of cuboids in multidimensional view of data. (6+6+6)

4.
 - (a) Explain the concepts of Object Relational DBMS (ORDBMS). Also explain the implementation challenges of ORDBMS.
 - (b) What is well-formed XML document ? How do you create a well-formed XML document ?
 - (c) What is OODBMS ? Compare and contrast OODBMS and RDBMS. (6+6+6)

5. Differentiate between the followings with suitable example : (6+6+6)
- (a) Coupling and cohesion.
 - (b) Serial and non-serial schedule.
 - (c) Virtual functions and static functions.
6. (a) Explain data abstraction in DBMS. Give differences between data aggregation and data generalization.
- (b) What is Object Query Language (OQL) ? Explain various features of OQL. Write syntax for object assignment and creation in OQL.
- (c) Describe Object Hierarchy and Class Hierarchy using example. Are they actually same thing ? Justify your answer. (6+6+6)
7. (a) Explain in brief the concepts of methods, relationships and attributes in object definition language.
- (b) What are CORBA services? Explain with suitable example. (9+9)

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