Roll No .....

MCADD-603

M.C.A. (Integrated), VI Semester

Examination, May 2022

Advanced DBMS

Time : Three Hours

Maximum Marks : 70

Note: i) Attempt any five questions.

ii) All questions carry equal marks.

1. a) Differentiate between objected Oriented Databases and Object Relational Databases.

   b) Write the comparison between aggregation and association.

2. a) Define the concept of aggregation. Give any two example to illustrate the use of this concept.

   b) Discuss the architecture of object oriented and object relational database.

3. a) Explain about query processing and optimization.

   b) Discuss about prevention and avoidance of distributed deadlock.

4. a) Describe the various Join operations with suitable symbols. Give one example for each.

   b) Write short notes on primary index and secondary index with suitable examples.

5. a) Define transaction. Differentiate between nested and multilevel transactions. Give example.

   b) What is the role of shared disk systems? How is it important in transaction processing.

6. a) Consider the universal relation R={A,B,C,D,E,F,G,H,I,J} and the set of functional dependencies F={ AB→C, A→DE, B→F, F→GH, D→IJ }. Assume no multivalues are present.

      i) What is the key for R?

      ii) Decompose R into 2 NF and then into 3 NF relations.

   b) Explain the various types of log based recovery techniques.

7. a) How accessing databases through WEB?

   b) Write role of R-tree and Quad-trees.

8. Write short note:

   i) XML database

   ii) Recursive query processing

   iii) Commit protocols

   iv) Data partitioning.

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