MCA - 405(D)

MCA IV Semester

Examination, June 2015

Advanced DataBase Management System

(Elective - I)

Time : Three Hours

Maximum Marks : 70

Note: i) Answer five questions. In each question part A, B, C is compulsory and D part has internal choice.

ii) All parts of each question are to be attempted at one place.

iii) All questions carry equal marks, out of which part A and B (Max. 50 words) carry 2 marks, part C (Max. 100 words) carry 3 marks, part D (Max. 400 words) carry 7 marks.

iv) Except numericals, Derivation, Design and Drawing etc.

Unit-I

1. a) Explain the origin of object oriented approach.
   b) What are complex object structures? How type constructors are used to create complex object structures.
   c) Differentiate between persistent and transient objects?
   d) Explain Gemstone? What is OPAL? And how quening is done in OPAL.

OR

Explain what the following terms mean in object oriented database terminology.

i) Method ii) Signature iii) Message
iv) Collection v) Extent.

Unit-II

2. a) Give an overview of deductive databases.
   b) What are the advantages of distributed databases?
   c) What are the various types of distributed database systems?
   d) What are the main software modules of DDBMS? Discuss the main function of each of these modules in the context of client server architecture.

OR

Compare parallel and distributed databases discuss the design of parallel databases.

Unit-III

3. a) Explain nested and multilevel transactions.
   b) What are long duration transaction?
   c) Explain what are transaction models.
   d) Explain weak levels of consistency is transaction processing .

OR

Write a brief note on transaction processing monitors.

Unit-IV

4. a) Explain the general model for active databases.
   b) What is recursive query processing?
   c) Explain trigger in SQL.
   d) Discuss design and implementation issues of Active Databases.

OR

Write a note on Databases Recovery.

Unit-V

5. a) What is spatial data model?
   b) Explain context based retrieval.
   c) Explain the features and properties of images.
   d) How do we access databases on web? Explain with the help of diagram.

OR

Write a brief note on Geographic Information System.