

67174

M.C.A. 4th Semester (with new notes)

Examination-May, 2015

Advanced Database Systems (New)

Paper-MCA-404

Time: 3 hours

Max. Marks: 80

Before answering the questions, candidates should ensure that they have been supplied the correct and complete question paper. No complaint in this regard will be entertained after the examination.

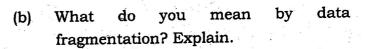
Note: Question No. 1 is compulsory. Attempt any four questions from the remaining four units, selecting at least one question from each unit. All questions carry equal marks.

- 1. Write notes on the following:
 - (a) Define object-oriented database. What are its characteristics?

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- (c) Differentiate between Active Databases and Spatial Databases.
- (d) What do you mean by data Replication? Explain.
- (e) What do you mean by Query processing? Explain.
- (f) What do you mean by data mining?
- (g) What do you mean by weak and strong entity type?
- (h) What do you mean by XML? Explain its two applications.

UNIT-I

- 2. (a) What do you mean by Extended Entity Relationship Model? Explain it with the help of a suitable example.
 - (b) Differentiate between RDBMS, OODBMS, ORDBMS.

3. Explain the following:

- (a) Database schema design for OODBMS
- (b) Transactions and Concurrency control

UNIT-II

- 4. (a) What do you mean by query processing and optimization? Explain with examples.
 - (b) Write a note on Information Retrieval Systems, Data Analysis and OLAP.
 - 5. (a) Explain the concept of Information Retrieval Decision Support Systems in detail with an example.
 - (b) What is data mining? List some major applications of data mining.

UNIT-III

6. (a) What do you mean by distributed database and parallel database system? What are their advantages and disadvantages? Explain.

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(b) What is client server architecture?
With a neat diagram, explain the
Three-tier client server architecture.



7. Explain the following:

- (a) Query processing in distributed databases.
- (b) Concurrency control and recovery in distributed databases.

UNIT-IV

- 8. (a) What do you mean by semi structured data model? Explain in detail.
 - (b) What do you mean by Geographic Information Systems? Explain in detail.
- 9. Explain the following in detail:
 - (a) Spatial databases
 - (b) Multimedia databases