

9. (a) How rules are interpreted in deductive database ?
Also discuss the datalog program and their safety.
- (b) Differentiate functional and procedural models of big data with their merits and usage.

Roll No.

67108

MCA 3rd Semester (CBCS Scheme)

w. e. f. Dec. – 2017-18

Examination – December, 2018

ADVANCE DATABASE SYSTEMS

Paper : 17MCA33C3

Time : Three Hours] [Maximum 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 examination.

Note : Attempt five questions in all, selecting one question from each Unit. Question No. 1 is compulsory. All questions carry equal marks.

1. Compulsory Question :

- (a) What is the difference between specialization hierarchy and specialization lattice ? Give example also.
- (b) How OID differs from primary key and tuple identifier in relational model ?
- (c) How is linear recursion used for specifying recursive queries in ORDBMS ?
- (d) How DSS is different from transaction processing system ?

- (e) What is I/O parallelism ? Name the partitioning techniques used for it.
- (f) What is degree of local autonomy ? How is it useful in DDBMS ?
- (g) How are active rules designed and implemented ?
- (h) Differentiate Text analytics and Predictive analysis in Big data.

UNIT - I

- 2. (a) Differentiate specialization and generalization. Why differences of both are not displayed in schema diagram ? Discuss disjointness and completeness constraints with example. <http://haryanapapers.com>
- (b) What are the different ways for transaction management and concurrency control in OODBMS ?
- 3. (a) How persistency is handled in OODBMS ? Discuss the methods for achieving the persistency of an object.
- (b) How does a category differ from regular shared subclass ? What is a category used for ? Illustrate the answer with example.

UNIT - II

- 4. (a) How type constructor, object identity, encapsulation of operations and inheritance are specified in ORDBMS ?

- (b) How effectiveness of information retrieval is measured ? Discuss the metrics for measuring retrieval effectiveness.

- 5. (a) How query is processed and optimized in ORDBMS ? Give an example also.
- (b) What are different schema architectures for multidimensional data models ? Discuss with diagrammatic notation.

UNIT - III

- 6. (a) What is intraquery parallelism ? How processing of query can speed up with intraquery parallelism ?
- (b) What are various design issues related to DDBMS ? Discuss their usage also.
- 7. (a) How server provides transaction services to client ? Illustrate with diagrammatical notation.
- (b) How concurrency control is achieved in distributed database ?

UNIT - IV

- 8. (a) How time is incorporated using tuple versioning and attributes versioning in temporal database ?
- (b) What is cloud storage ? Discuss cloud storage architecture with diagram.