CS - 503

B.E. V Semester

Examination, December 2014

Database Management System

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.1 00 words) carry 3 marks, part D (Max.400 words) carry 7 marks.

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

Unit-I

1. a) How is the data-based approach different from the file based approach?

b) Differentiate the term data, information and knowledge.

c) What is schema and subschema? Explain these two concepts through examples.

d) What are the problem caused by data redundancies? Can data redundancy be completely eliminated when a database approach is used.

OR

Define the concept of aggregation. Give several examples of where this concept is useful.

Unit-II

2. a) What is aggregate functions of SQL?

b) What is the difference between procedural DML and non procedural DML?

c) Explain the characteristics of relation. Also explain the relational databases.

d) What are integrity constraints? Define the term primary key constraint and foreign key constraint. How are these constraints expressed in SQL?

OR

Explain the Join operator, its relevance and its various types.

Unit-III

3. a) Discuss how dangling tuple may arise?

b) What is query optimization?

c) What is join dependency? How is it different to that of Multivalued dependency and Functional dependency?

d) "Redundancy is the back bone of reliability, therefore, a reliable database system should not attempt normalization beyond 3NF". Comment on the above statement. Give reason in support of or against the above statement.

OR

What is Normalization? Explain second normal form with the help of an example.

Unit-IV

4. a) What is web databases?

b) Define the concept of Data warehousing.

c) What is a schedule? What is an interleaved schedule? How is schedule related to the term serializability?

d) Explain the advantages and disadvantages of distributed database.

OR

What is time stamping? Explain a mechanism of concurrency control that uses time stamping with the help of an examples.

Unit-V

5 a) Define segment, extents and block,

b) What is Flashback queries? Where it is used?

c) Explain the advantage of stored procedures.

d) What is PL/SQL exception handling and why it is needed? Also explain user defined exception and system. Defined Exceptions.

OR

Explain the following:

i) Implicit and Explicit cursors

ii) Dedicated and multi threaded server