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Roll No ....

CS-503

B.E. V Semester

Examination, June 2016

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

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

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Unit-I

1.   a)   What is schemas?

b)   What is Aggregation and specialization?

c)   What is entity and attribute? Explain the entity types.

d)   Explain the various data models briefly with an example.

OR

Draw an ER diagram for a small marketing company database. Assume suitable data.

Unit-II

2.   a)   Write the commands of DDL.

b)   What is SQL triggers?

c)   Explain integrity constraints.

d)   What are different types of relational query languages? Discuss the different techniques for optimising the queries.

OR

Explain select, Project, Join, and division with example.

Unit-III

3.   a)   State the purpose of query optimisation.

b)   Define the third normal form.

c)   What do you mean by work entity set?

d)   Explain non loss decomposition and functional dependencies with example.

OR

Consider the universal relation R {A, B, C, D, E, F, G, H, I} and the set of functional dependencies F = {A, B} →{C}, {A} → {D, E}, {B} → {F}, {F} → {G, H} {D} → {I, J}. What is the key for R? Decompose R into 2NF, then 3NF relations.

Unit-IV

4.   a)   What is serializability?

b)   What is the difference between view and table?

c)   What are the problems of lock based protocols?

d)   State and explain the three concurrency problems.

OR

Explain immediate update and deferred update of recovery techniques.

Unit-V

5.   a)   What is cursor?

b)   What is in live queries?

c)   Explain user defined functions and their limitations.

d)   Explain the oracle inception handling mechanism.

OR

Write the branching and looping constructs with example.

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