

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.

Unit-I

- What is schemas?
 - What is Aggregation and specialization?
 - What is entity and attribute? Explain the entity types.
 - 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

- Write the commands of DDL.
 - What is SQL triggers?
 - Explain integrity constraints.
 - 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

- State the purpose of query optimisation.
 - Define the third normal form.
 - What do you mean by work entity set?
 - 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 $F = \{A, B \rightarrow \{C\}, \{A\} \rightarrow \{D, E\}, \{B\} \rightarrow \{F\}, \{F\} \rightarrow \{G, H\}, \{D\} \rightarrow \{I, J\}\}$. What is the key for R? Decompose R into 2NF, then 3NF relations.

Unit-IV

- What is serializability?
 - What is the difference between view and table?
 - What are the problems of lock based protocols?
 - State and explain the three concurrency problems.

OR

Explain immediate update and deferred update of recovery techniques.

Unit-V

- What is cursor?
 - What is in live queries?
 - Explain user defined functions and their limitations.
 - Explain the oracle inception handling mechanism.

OR

Write the branching and looping constructs with example.
