II Semester M.C.A. Degree Examination, June 2015
(CBCS)
MCA 202 T : DATABASE MANAGEMENT SYSTEM

Time : 3 Hours   Max. Marks : 70

Instruction : *Answer **any five** questions from Part – **A** and **any four**
questions from Part - **B**.*

PART – A

Note : Answer **any five**. Each carries **six** marks.   (5×6=30)

1. Differentiate between file organization method and database management system.

2. What is entity, weak entity, primary attribute, composite attribute, derived attribute ? Give example for each of them.

3. What is indexing ? Why is it necessary for database management system ? Write a note on primary indexing and secondary indexing.

4. Define 1 normalization, second normalization, functional dependency, fully functional dependency and third normalisation form. Give examples.

5. What is a JOIN, operation with example. Explain EQUI JOIN, NATURAL JOIN and LEFT JOIN.

6. What is concurrency ? How does one handle concurrency in Database Management System ?

7. Write syntax for creating table, creating view, deleting a table and updating a table in SQL.

8. What are the roles of a Database Administrator ?

PART – B

Answer **any four**. Each carries 10 marks.   (4×10=40)

9. On the occasion of Birth Anniversary of Kannada Film Legend Dr. Rajkumar, the Karnataka Film Chambers would like to build a database on Dr. Rajkumar. The film Chambers want to store the movie name, year of release, co-actors, director of the movie, producer of the movie. Film chambers also wish to store songs details of Dr. Rajkumar. like song title. co-singer, movie name, director of the movie. There are some awards like Data Saheb Palkhe, Film chambers, Film Festival awards conferred on Dr. Rajkumar. Please help the film chambers of Karnataka by offering your solution through an appropriate E-R diagram

P.T.O.

10. Using the following tables of election commission of Karnataka, write SQL statements to solve the given question :

CONSTITUENCY (const-id, name-of-constituency, district, no-of-voters)

CANDIDATE (candidate-id, name, gender, date-of-birth, address, party-id) [party-id is the primary key of PARTY (party-id)]

PARTY (party-id, name, year-of-estd, address)

RESULT (result-id, const-id, candidate-id) [const-id is the primary key of CONSTITUENCY (const-id), and candidate-id is the primary key of CANDIDATE (candidate-id)]

Write SQL for the following :

a) How many seats have been won by the party "Namma Party" ?

b) Display names of candidates, who are women won by the "Raithara Party" ?

c) Who are the defeated candidates in the constituency with const-id as 83 ? Display defeated candidates party, gender of the defeated candidate and name.

11. Discuss salient features of a relational database management system.

12. What are aggregate functions in SQL ? With suitable example, explain SUM, COUNT, MAX, MIN and Average. Give an example for ORDER By and Group By.

13. What is serializability ? Why is it necessary for a database management system ? Give an example with three transactions t_1, t_2, t_3, with R (Read) and W(Write operation) which is serializable.

14. Write a note on the following :

a) ACID property

b) PL SQL.