M 27620

Reg. No. : .....

Name : .....

II Semester M.C.A. Degree (Reg./Sup./Imp.) Examination, July 2015
(2013 and Earlier Admn.)
MCA C2.2 – DATABASE MANAGEMENT SYSTEMS

Time: 3 Hours Max. Marks : 80

Instructions : *1) Answer **any five** full questions.*
*2) **All** questions carry **equal** marks.*

1. a) Define DBMS system. What are the advantages of using DBMS ? 8

   b) Explain the main phases of Database. 8

2. a) Explain attribute data types and domains in SQL. 10

   b) What are the different notations used in E-R diagram and what is the naming conventions of schema construct ? 6

3. a) Discuss on aggregate functions with suitable examples. 8

   b) What are constraints ? Explain the important constraints on relational database. 8

4. a) Justify SELECT operation is commutative with example. 8

   b) Discuss the algorithm used in ER-Relational mapping. 8

5. a) What is normalisation ? Explain 2NF and 3NF with examples. 10

   b) Explain CREATE table command in SQL with example. 6

6. a) Explain SQL query with proper syntax and example. 8

   b) What are views in SQL ? Discuss on the strategies to implement. 8

P.T.O.

7. a) Given the following database schema

Sailors(Sid, rating, age)

Boats(bid, bname, colour)

Reserves(Sid, bid, date)

Write the following queries in SQL.

i) Find the name of Sailors reserved for boot number 500(bid = 500)

ii) Find the names of Sailors who have reserved Green boot.

iii) Find the Sailor having highest rating.

iv) Delete all Sailors with rating less than 10.

v) Update the rating of Sailor with Sid = 500 to Sid = 900. 10

b) Explain Database anomalies with example. 6

8. Write a short notes on

a) DDL and DML

b) BCNF

c) Assertions and Triggers

d) ACID properties. (4×4=16)