



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.

(4x4=16)

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