

Printed Pages: 1

Paper Id:

2	1	4	4	2	1
---	---	---	---	---	---

Sub Code: RCA 401

Roll No.

--	--	--	--	--	--	--	--	--	--

MCA
(SEM IV) THEORY EXAMINATION 2017-18
DATABASE MANAGEMENT SYSTEMS

Time: 3 Hours**Total Marks: 70****Note:** Attempt all Sections. If require any missing data; then choose suitably.**SECTION A****1. Attempt all questions in brief. 2 x 7 = 14**

- a. What do you mean by DBMS?
- b. How entity sets converted to relations?
- c. Define joins in relations
- d. Write the ways to declare key constraints.
- e. Define secondary index.
- f. What do you mean by query plan?
- g. How compilation of queries is done?

SECTION B**2. Attempt any three of the following: 7 x 3 = 21**

- a. Describe evolution of database systems.
- b. Write down the basics for relational model. How E/R diagrams can be converted to relation designs?
- c. Discuss simple queries and queries involving more than one relation.
- d. Explain various indexes on sequential files.
- e. Discuss various issues and models for resilient operations.

SECTION C**3. Attempt any one part of the following: 7 x 1 = 7**

- (a) Discuss various elements of E/R model.
- (b) Explain modeling of constraints in E/R model.

4. Attempt any one part of the following: 7 x 1 = 7

- (a) Write short note on design of relation database schemas.
- (b) Discuss extended operators of relational algebra.

5. Attempt any one part of the following: 7 x 1 = 7

- (a) Discuss relation schema, view and database modifications.
- (b) Explain keys, foreign keys and constraints on attributes and tuples.

6. Attempt any one part of the following: 7 x 1 = 7

- (a) Discuss compressed bitmaps and managing bitmap indexes.
- (b) Explain scanning tables and parameters for measuring costs.

7. Attempt any one part of the following: 7 x 1 = 7

- (a) What do you mean by serial and serializable schedules? Explain conflict serializability.
- (b) Discuss concurrency control by time stamps.