Roll No. ☐☐☐☐☐☐☐☐☐☐☐☐☐   Total No. of Pages : 02

Total No. of Questions : 09

MCA   (Sem.–1)

ADVANCED DATABASE MANAGEMENT SYSTEM

Subject Code : PGCA-1953

M.Code : 79038

Date of Examination : 17-01-2023

Time : 3 Hrs.   Max. Marks : 70

INSTRUCTIONS TO CANDIDATES :

1. SECTION-A is COMPULSORY consisting of TEN questions carrying TWO marks each.
2. SECTION - B & C. have FOUR questions each.
3. Attempt any FIVE questions from SECTION B & C carrying TEN marks each.
4. Select atleast TWO questions from SECTION - B & C.

SECTION-A

1) Write short notes on :

   a) DBMS Data Models

   b) ER Model

   c) Functional Dependencies

   d) Relational Calculus

   e) Concurrency Control

   f) Parallel Database

   g) Commit Protocols

   h) Temporal Hierarchies

   i) Spatial data structures

   j) XML Data Model.

SECTION-B

2) What is data integrity? Explain the types of integrity constraints.

3) What are the advantages of normalized relations over the un-normalized relations?

4) Write a short note on :

a) Serializability

b) Recoverability.

5) Explain 1NF, 2NF and 3NF of normalization with example. What do you understand by multi version concurrency schemes?

SECTION-C

6) Explain Client-Server Architectures.

7) Explain XML Database. With example.

8) Write short notes on:

a) Temporal relationships

b) Data analytics in multidimensional database

c) Concurrency control.

9) Discuss the difference between intra query parallelism and intra operation parallelism.

NOTE : Disclosure of Identity by writing Mobile No. or Marking of passing request on any paper of Answer Sheet will lead to UMC against the Student.