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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.