PAPER ID-410880

Subject Code: KMRNIT03

Roll No:

MBA
(SEM IV) THEORY EXAMINATION 2023-24
DATA BASE MANAGEMENT SYSTEM

TIME: 3 HRS

M.MARKS: 100

Note: 1. Attempt all Sections. If require any missing data; then choose suitably.

SECTION A

1. Attempt *all* questions in brief. 2 x 10 = 20

Q no.	Question	Marks	CO
a.	Define DML	02	1
b.	What do you understand by DBMS?	02	1
c.	Define primary key.	02	2
d.	Differentiate Super key and Candidate key.	02	2
e.	Discuss the concept of indexes in SQL.	02	3
f.	List out the types of Functional Dependencies.	02	3
g.	What is Log based Recovery?	02	4
h.	Explain Concurrency control.	02	4
i.	Expand OODB.	02	5
j.	Write down the problem areas of distributed data base system.	02	5

SECTION B

2. Attempt any *three* of the following: 3 x 10 = 30

a.	Define E-R model with example. How to convert an E-R model into relational schema?	10	1
b.	Describe the tuple relational calculus with example.	10	2
c.	Explain 1NF, 2NF and 3NF with example.	10	3
d.	Discuss the concept of serializability with the help of inferring serial and non-serial schedules.	10	4
e.	"Data Mining is the backbone of Data Warehousing". Explain.	10	5

SECTION C

3. Attempt any *one* part of the following: 1 x 10 = 10

a.	Draw the overall structure of DBMS and explain its various components.	10	1
b.	Distinguish strong entity set with weak entity set? Draw an ER diagram to illustrate weak entity set?	10	1

4. Attempt any *one* part of the following: 1 x 10 = 10

a.	Define relational algebra. Explain various relational algebraic operations with example.	10	2
b.	Discuss various types of schemas in Database management system with diagram.	10	2

5. Attempt any *one* part of the following: 1 x 10 = 10

a.	What are the various data types in SQL? Explain them with example?	10	3
b.	Explain functional dependencies? Write the types of functional dependencies, also.	10	3

6. Attempt any *one* part of the following: 1 x 10 = 10

a.	List the ACID properties. Explain the usefulness of each with example.	10	4
b.	Explain Deadlock in detail with an example.	10	4

7. Attempt any *one* part of the following: 1 x 10 = 10

a.	Explain in detail the Client - Server Architecture for DDBMS	10	5
b.	List out the differences between spatial and geographical databases.	10	5

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