

**MASTER OF COMPUTER APPLICATION
SECOND SEMESTER
ADVANCED DATABASE MANAGEMENT SYSTEM
MCA-203**

**SET
A**

[USE OMR FOR OBJECTIVE PART]

Duration: 1:30 hrs.

Full Marks: 35

Time: 15 mins.

(Objective)

Marks: 10

1×10=10

Choose the correct answer from the following:

1. The number of tuples obtained by applying cartesian product over relation X(3 records) and Y(6 records) are:
a. 9
b. 3
c. 2
d. 18
2. In a Relation X (A,B,C), if $A \rightarrow B$ and $B \rightarrow C$ then $A \rightarrow C$ is the definition of
a. Functional dependency
b. Multi valued dependency
c. Transitive dependency
d. Join dependency
3. In a Entity Relationship Diagram, a weak entity is denoted by-
a. Dotted rectangle
b. Double lined rectangle
c. Double Dotted lined rectangle
d. Dotted oval
4. A column in the child table that references a primary key of the parent table is called as
a. Foreign Key
b. Candidate Key
c. Composite Key
d. All of the above
5. Which of the following join is used to get all the tuples of a relation X and Y with Null values with corresponding missing values?
a. Inner join
b. Left outer join
c. Right Outer join
d. Full outer join
6. Which operation is used to extract specified columns from a table?
a. Join
b. Project
c. Select
d. Extract
7. Which of the following is not a Codd's Rule?
a. View Insertion Rule
b. Logical data independence
c. Non subversion Rule
d. Systematic treatment of null
8. The process of decomposition of a table is called-
a. Specialization
b. Generalization
c. Normalization
d. None of the above

9. "It is the collection of information stored in a database at a particular moment." What is it?
- | | |
|---------------|-------------|
| a. Schema | b. Instance |
| c. Data Model | d. View |
10. The database file organization can be performed using
- | | |
|------------------|---------------------|
| a. Indexing | b. Hashing |
| c. Hash function | d. All of the above |

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(Descriptive)

Time : 1 hr. 15 mins.

Marks: 25

[Answer question no.1 & any two (2) from the rest]

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|----|---|----|
| 1. | How Data Abstraction plays a very crucial role in Database Management System? Explain along with a suitable diagram | 5 |
| 2. | Explain any 5 Codd's Rule. | 10 |
| 3. | What is Normalization? Explain 4 th Normal Form with the help of a suitable example. | 10 |
| 4. | How database schema differentiates with database instance? Explain with the help of example for each. | 10 |
| 5. | Differentiate between Dense and Sparse Indexing. Explain with examples for each. | 10 |

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