

3. What is metadata? Why do we need metadata in database? Explain.
4. What is a Data model? Discuss important Data Models.
5. What are the different arithmetic operations in SQL? Explain with examples.
6. What is normalization? Why do we need to normalize the database? Briefly explain normalization forms.
7. Explain JOIN operation? Also discuss the different types of joins.
8. Write Codd's rules for relational database systems? Explain any four of them.
9. Write notes on any two of the following:
 - (a) DML statements in SQL
 - (b) MIS
 - (c) Deadlock
 - (d) Database design

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2020

Time : 3 Hours

Full Marks : 80

Candidates are required to give their answers in

their own words as far as practicable.

The questions are of equal value.

Answer five questions in which

Question No.1 is compulsory.

1. Choose the correct Answer of the following :

(a) Row in a database relation is also called _____

- (i) Entity
- (ii) Tuple
- (iii) Relation
- (iv) Domain

(b) Information is :

- (i) Data
- (ii) Processed Data
- (iii) Manipulated input
- (iv) Any Computer output

- (c) The management information system (MIS) structure with one main Computer System is called a :
- (i) Hierarchical MIS Structure
 - (ii) Distributed MIS Structure
 - (iii) Centralized MIS Structure
 - (iv) Decentralized MIS Structure
- (d) Which of the following is a problem of file management system ?
- (i) Difficult to update
 - (ii) Lack of data independence
 - (iii) Data redundancy
 - (iv) All of the above
- (e) The Data Flow Diagram is the basic Component of system.
- (i) Conceptual
 - (ii) Logical
 - (iii) Physical
 - (iv) None of the above
- (f) Tables in second normal form (2NF) :
- (i) Eliminate all hidden dependencies

- (ii) Eliminate the possibility of a insertion anomalies
 - (iii) Have a composite key
 - (iv) Have all non-key fields depend on the whole primary key
- (g) Which of the following is the correct order of keywords for SQL SELECT statements ?
- (i) SELECT, FROM, WHERE
 - (ii) FROM, WHERE, SELECT
 - (iii) WHERE, FROM, SELECT
 - (iv) SELECT, WHERE, FROM
- (h) The attribute which has more than one value is called _____.
- (i) Single valued attribute
 - (ii) Multi valued attribute
 - (iii) Composite attribute
 - (iv) Derived attribute

2. Explain the information system and discuss its components. Also list various types of an information system.