Enroll. No._____

MARWADI UNIVERSITY

Faculty of Technology

[INFORMATION TECHNOLOGY/ COMPUTER ENGINEERING]

[B.Tech] SEM: 3rd SUMMER-2019

Subject: - (Database Management System) (01CE0302) **Date:-10/04/2019**

Total Marks:-100 **Time: - 03:00 hours**

Instructions:

1. **All Questions are Compulsory.**
2. **Make suitable assumptions wherever necessary.**
3. **Figures to the right indicate full marks.**

Question: 1.

(a) Objective MCQ [10]

1. Which of the following are the properties of entities:
   (A) Groups
   (B) Table
   (C) Attributes
   (D) none of the mentioned

2. Which of the following is not a property of transactions?
   (A) Atomicity
   (B) Concurrency
   (C) Isolation
   (D) Durability

3. DBA stands for
   (A) Database Administrator
   (B) Data base Access
   (C) Data bank administrator
   (D) Data blank Access

4. The data Model which describes how the data actually stored is
   (A) Internal model
   (B) External model
   (C) Logical model
   (D) None of the above

5. Fifth Normal form is concerned with
   (A) Functional dependency
   (B) Multivalued dependency
   (C) Join dependency
   (D) Domain-key

6. DML stands for
   (A)-Data Manipulation Language
   (B) Derived manual Language
   (C) Data management Language
   (D) None of these

7. The term attribute refers to
   (A) Record of a table
   B) Column of the table
   (C) Tuple of the table
   (D) None of the mentioned

8. In SQL which command is used to display the data from the table
   (A) Create Command
   (B) Alter Command
   (C) Update Command
   (D) Select Command

9. Data are:
   (A) Raw facts and figures
   (B) Information
   (C) Electronic representation of facts
   (D) Electronic representation of information

10. DBMS is used to:
    (A) Eliminate data redundancy
    (B) Maintain data integrity
    (C) Establish relationships among different files
    (D) all of the mentioned

(b) Define the following [10]
1. Primary Key
2. DCL
3. Create in SQL
4. DDL
5. Data
6. Entity
7. Delete in SQL
8. DML
9. DBMS
10. SQL

Question: 2.

(a) Explain advantages of Database management system over Conventional File-based system. [08]

(b) Explain DBMS three tier architecture in detail. [08]

OR

(b) List and explain all the Relational algebra operators. [08]

Question: 3.

(a) What is conflict serializability? Explain with example. [08]

(b) Write a short note on trigger. [04]

(c) What are the primary key and candidate key? Explain with example. [04]

OR

(a) Draw E-R diagram for bank management system. [08]

(b) Discuss ACID properties in brief. [04]

(c) Write a note on two phase commit protocol. [04]

Question: 4.

(a) Explain 1st, 2nd and 3rd,4th,5th normal form in brief. [08]

(b) Explain roles of database administrator. [04]

(c) Define transaction various states in brief with diagram. [04]

OR

(a) Discuss generalization and specialization in E-R diagram with suitable diagram. [08]

(b) Discuss any four aggregate functions with example. [04]

(c) What is Views? Give advantage of views. [04]

Question: 5.

(a) List and explain applications of DBMS. [08]

(b) What is Data Independence? Explain with example. [04]

(c) What is functional dependency? Explain its types in detail. [04]

OR

(a) Compare various user types of DBMS .Explain each type in details. [08]

(b) What are the uses of stored procedure in DBMS [04]

(c) Explain NOT NULL, Foreign Key. [04]

Question: 6.

(a) Assume a relation name STUDENT with name , branch, rollno and fees column.
Perform the following SQL queries:
Insert following records into STUDENT table
1. Insert values into table JASS, CE, 1071, 10000
2. Insert values into table RAJ, CE, 1011, 9000
3. Insert values into table ALICE, ECE, 1094, 1000
4. show all the data you inserted into student table [08]

(b) Explain any two DML commands with examples. [04]

(c) Discuss encryption in detail. [04]

OR

(a) Write down the differences between PL/SQL and SQL.Write structure of PL/SQL [08]

(b) Explain GRANT and REVOKE commands. [04]

(c) Write short note on Log based recovery. [04]

---Best of Luck---

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Que. Paper weight-age as per Bloom's Taxonomy

No.	Que. Level	% of weight-age	
		% of weight -age	Que. No.
1	Remember/Knowledge	18.6	Q1(a), Q1(b), Q4(c), Q5 (a)
2	Understand	34.8	Q2(a), Q2(b), Q2(b) or, Q4(a), Q4(a) or, Q4 (b) or, Q4 (c) or, Q5(b), Q5(c), Q6 (b),
3	Apply	20.9	Q3(a),Q3(b),Q3(c), Q3(b) or,Q3(c) or,Q4 (b), Q5(c) or, Q6(b) or
4	Analyze	13.9	Q3 (a) or, Q5(a) or, Q5(b) or, Q6(c) or
5	Evaluate	11.6	Q6(a), Q6(a) or, Q6(c)
6	Higher order Thinking		

GRAPH: