Reg. No. : | | | | | | | | | | |

Question Paper Code: 94804

B.E./B.Tech. DEGREE EXAMINATION, NOV 2023

Fourth Semester

Information Technology

19UIT404- DATABASE MANAGEMENT SYSTEMS

(Regulations 2019)

Duration: Three hours Maximum: 100 Marks

Answer All Questions

PART A - (10x 2 = 20 Marks)

1.	Who is DBA? What are the responsibilities of a DBA?	CO1- U
2.	List any applications of DBMS.	CO1- U
3.	What is the difference between primary and foreign key?	CO1- U
4.	Explain Constraints in SQL?	CO1- U
5.	Explain Normalization and what are the advantages of it?	CO1- U
6.	What are the key differences between SQL and PL SQL?	CO1- U
7.	List ACID properties.	CO1- U
8.	Define deadlock.	CO1- U
9.	What are the differences between SQL and NoSQL databases?	CO1- U
10.	What are the features of NoSQL?	CO1- U

PART – B (5 x 16= 80Marks)

11.	(a)	(i) Briefly describe about Views of data.	CO1-U	(10)
		(ii) What are the functions of database administrator	CO1-U	(6)
		Or		
	(b)	Explain the database management systems architecture in detail with a neat diagram	CO1-U	(16)

12. (a) Create Tables as follows by choosing appropriate data type and set the necessary primary and foreign key constraints: CO2-App (16)

Product (Prodid, Prodesc, Price, Stock)
Purchase (Purid, Proid, qty, supname)
Sales (Saleid, Proid, qty, custname)

1. Display supname when a particular product id is given ("DAL23").
2. List of names who are both supplier as well as customer.
3. Create a Trigger which reduces the stock of Product that is been inserted in sales and update the stock when purchase is made.

Create a procedure which displays Product ids and sum of quantity in sales.

Or

(b) Create Tables as follows by choosing appropriate data type and set the necessary primary and foreign key constraints: CO2-App (16)

Customer (Custid, Custname, Addr, phno,panno)
Loan (Loanid, Amount, Interest,Custid)
Account (Accid, Accbal, Custid)

1. Add a column CUSDOB in customer table.
2. Select the customers whose name ends with 'SINGH' and order by custid
3. Display the customer ids and sum of his account balances
4. Display the accounts of customer ids 'C01','C02','C03'
5. Select the customer name, id of customers whose number of accounts is greater than 20000

Create a procedure to print the Loan details when Customer name is given as the parameter.

13. (a) Customer Table CO2-App (16)

ID	Name	Age	Address	Salary
1	Ramesh	23	Allahabad	20000
2	Suresh	22	Kanpur	22000
3	Mahesh	24	Ghaziabad	24000
4	Chandan	25	Noida	26000
5	Alex	21	Paris	28000
6	Sunitha	20	Delhi	30000

(i) Write PL/SQL Program to update the table and increase the salary of each customer by 5000. Here SQL%RowCount attribute used to determine the number of rows affected.(Implicit Cursors)

(ii) Write PL/SQL Program to retrieve the Customer name and Address using Explicit Cursors.

Or

(b) Write a PL/SQL procedure and functions to find minimum among two values of the numbers. CO2-App (16)

14. (a) Explain various recovery techniques during transaction in detail. CO1- U (16)

Or

(b) Explain the ACID Properties of a transaction. CO1- U (16)

15. (a) Explain in detail about the different types of NoSQL databases with suitable example CO1- U (16)

Or

(b) Explain in detail about Mongodb architecture with CURD operations. CO1- U (16)

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