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BCACACN 301

**Third Semester B.C.A. Degree Examination, Dec. 2024/Jan. 2025
(NEP – 2020) (2022 – 2023 Batch Onwards)
DATABASE MANAGEMENT SYSTEMS**

Time : 2 Hours

Max. Marks : 60

Note : Answer **any six** questions from Part – A and **one full** question from **each** Unit in Part – B.

PART – A

1. a) Define DBMS. (6×2=12)
- b) Write any two responsibilities of a DBA.
- c) Define Single-Valued Attribute. Give one example.
- d) Which are the possible cardinality ratios for binary relationship types.
- e) Define super key. Give an example.
- f) What is dual table ? Give an example.
- g) How do you sort the records of a table in SQL ? Give one example.
- h) Give the structure of the PL/SQL program.

PART – B

Unit – I

2. a) What are the characteristics of DBMS ? Explain.
- b) Explain three schema architecture of database with a neat diagram. (6+6)
3. a) Explain any four advantages of DBMS.
- b) Describe the various symbols used in an ER diagram using example. (6+6)

Unit – II

4. a) Discuss Domains and attributes with respect to relational schema.
- b) With example explain 1NF and 2NF. (6+6)
5. a) Discuss Entity integrity and referential integrity constraints.
- b) Explain BCNF with example. (6+6)

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Unit – III

6. a) Explain any four aggregate functions with syntax and example for each.
 b) i) Explain any three clauses used in SELECT statement.
 ii) Describe check constraint. Write the syntax and give an example. **(6+6)**
7. a) Create the table described below : Table name: CLIENT_MASTER.

Column Name	Data type	Size	Attributes
CLIENT_NO	Varchar 2	6	Primary key/first letter must start with C, NOT NULL
NAME	Varchar 2	20	
ADDRESS1	Varchar 2	30	
ADDRESS2	Varchar 2	30	
CITY	Varchar 2	15	
PINCODE	Number	8	NOT NULL
STATE	Varchar 2	15	NOT NULL
BALDUE	Number	10, 2	NOT NULL

Consider the table CLIENT_MASTER given, write the following queries :

- i) Find out the names of the clients with CLIENT_NO='C00001'
 ii) Change the city of CLIENT_NO 'C00005' to 'Bangalore'
 iii) Add a column called 'TELEPHONE' of data type 'NUMBER' and size=10 to the CLIENT_MASTER table.
 iv) Destroy the table CLIENT_MASTER along with its data.
- b) Explain the types of joins used in sql with example. **(6+6)**

Unit – IV

8. a) Explain various looping statements of PL/SQL with syntax.
 b) With syntax and example explain how a stored procedure is created and executed in PL/SQL ? **(6+6)**
9. a) What do you mean by implicit cursor ? Explain the four attributes of implicit cursor.
 b) With syntax and example explain how a function is created and executed in PL/SQL ? **(6+6)**

