

A (Printed Pages 4)
(20222) Roll No.
B.Sc. (Com.Sci.)-V Sem.

NP-3608 (CV-III)

B.Sc. (Computer Sci.)

Examination, Dec. 2021

**Data Base Management System
(BCS-501)**

Time : 1½ Hours } [Maximum Marks : 75

Note : Attempt **all** the sections as per instructions.

Section-A

(Very Short Answer Questions)

Note : Attempt any **two** questions. Each question carries **7.5** marks. Very short answer is required not exceeding 75 words. $2 \times 7.5 = 15$

1. Differentiate between schema and instances.
2. What is a transaction system?

3. What do you mean by super and candidate Key?
4. Differentiate between char and varchar data types.
5. Define transitive dependency with example.

Section-B

(Short Answer Questions)

Note : Attempt any **one** question out of the following **three** questions. Each question carries **15** marks. Short answer is required not exceeding 200 words. $1 \times 15 = 15$

6. What do you mean by generalization and aggregation? Explain with example.
7. Discuss the architecture of DBMS.
8. Define the advantage and disadvantage of Relational Approach.

Section-C

(Detailed Answer Questions)

Note : Attempt any **two** questions out of **NP-3608 (CV-III)/2**

the following **five** questions. Each question carries **22.5** marks. Answer is required in detail. $2 \times 22.5 = 45$

9. (a) Explain basic set oriented operation of relational algebra.
- (b) What is the use of cursor in DBMS?
10. (a) What are the alternative approaches to database design?
- (b) Explain second and third normal forms.
11. (a) Create a table in SQL named "Employee" with three columns. "Emp_no", "Name", "City."
- (b) Write SQL queries to insert three record in "Employee" table.
- (c) Add one more column (Dept_no) in "Employee" table.

(d) Update table "Employee" as follows:
Dept_no

A-1

B-1

C-1

(e) Write the use of SQL.

12. (a) What is a deadlock? How it is handled in DBMS?
- (b) What is a log based recovery?
13. (a) What are the different problem occurs from concurrent execution of transaction?
- (b) Give the example of conflict serializability.