

A (Printed Pages 4)
(21222) Roll No.
B.Sc. (Com. Sci.)-V Sem.

NP-3608

**B.Sc. (Computer Science)
Examination, Dec.-2022
Data Base Management System
(BCS-501)**

Time : Three Hours / [Maximum Marks : 75

Note : Attempt all Sections as per instructions.

Section - A

Note : Attempt all five questions. Each question carries three marks. $5 \times 3 = 15$

1. Define Database system v/s File system?
2. Define the Tuple & Key in brief?
3. What do you mean by functions used in SQL?

4. Write the command for creating a Table employee having Name, Emp_code, salary, designation & address.
5. What is SQL?

section-B

Note : Attempt any two questions out of the following three questions. Each question carry 7.5 marks.

$7.5 \times 2 = 15$

1. Define the DBMS Architecture with a Neat & Clean Diagram?
2. Define the following-
 - (1) Key constraints
 - (2) Domain constraints
3. What do you mean by the concurrency control & locking techniques for concurrency control?

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Section-C

Note : Attempt any **three** questions out of the following five questions. Each question carry 15 marks. $15 \times 3 = 45$

1. (a) Explain the concept of Transactions processing? What is serializability?
(b) Why the concurrency control needed? 8+7
2. Explain the following with a suitable example: 7.5+7.5
 - (a) Deadlock Avoidence
 - (b) MVD
3. What do you mean by the Recovery?
What are the different techniques for Recovery from Transaction failures?

4. (a) Explain the principles of the various RAID levels. 7.5+7.5
(b) Explain the principles of Indexed Nested Loop Join?
5. Design an E.R. Diagram for a Hospital Management System?