

[Total No. of Questions : 5]

SEAT No. :

[Total No. of Pages : 2]

F.Y.B.Sc.(CS)

**CS - 122 : RELATIONAL DATABASE MANAGEMENT SYSTEM (RDBMS)
(2019 Pattern) (Semester - II)**

[Time : 2 Hours]

[Max. Marks : 35]

Instructions to the candidates:

- 1) Total number of questions are 5.
- 2) Total marks assigned 35.
- 3) Time assigned 2 hours.

Q1) Attempt any EIGHT of the following (Out of TEN) : [8 × 1 = 8]

- a) Write syntax of function.
- b) Explain two characteristics of Big Data.
- c) Describe commit and rollback.
- d) What is a transaction schedule?
- e) List any two advantages of NoSQL.
- f) Define stored procedure.
- g) What is distributed database?
- h) Write a PLSQL block structure.
- i) Describe object privilege.
- j) Define Starvation.

Q2) Attempt any FOUR of the following (Out of FIVE) : [4 × 2 = 8]

- a) Explain shared and exclusive locks.
- b) Describe the types of cursor.
- c) Why is referential integrity important in a database?
- d) What do you mean by exception handling?
- e) Draw state diagram of transaction.

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Q3) Attempt any TWO of the following (Out of THREE) : [2 × 4 = 8]

- a) A Schedule has transaction T1, T2, and T3 as given below;
r1(x), r2(z), r1(z), r3(x), r3(y), w1(x), w3(y), r2(y), w2(z), w2(y)
- Draw precedence graph.
 - Is schedule conflict serializable or not?
 - Find respective serial schedule.
- b) What is trigger? Explain with syntax and example.
- c) Explain statistical database security.

Q4) Attempt any TWO of the following (Out of THREE) : [2 × 4 = 8]

- a) Write a plpgsql function that accepts student credit out of 10 marks and return grade based on eligibility as-
- If credit is above 7= A grade
 - If credit less than 7= B grade
 - If credit less than 5= C grade
- b) What is database deadlock? explain various deadlock handling techniques.
- c) Explain the phases of ARIES algorithm.

Q5) Attempt any ONE of the following (Out of TWO) : [1 × 3 = 3]

- Explain the encryption and decryption technique for database.
- Explain serial and concurrent schedule with example.

