

Total No. of Questions : 5]

SEAT No. :

P5130

[Total No. of Pages : 2

[5823]-202

First Year B.Sc. (Computer Science)
CS-122: Relational Database Management Systems
(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:

[8×1=8]

- a) What do you mean by trigger?
- b) State the different ways to call a PL/SQL function.
- c) What is the concurrent schedule?
- d) Define deadlock.
- e) What is audit trail?
- f) What do you mean by referential Integrity?
- g) What is the use of commit command?
- h) what is log?
- i) Define distributed database.
- j) Which are the types of NOSQL database?

Q2) Attempt any four of the following

[4×2=8]

- a) Explain types of cursor.
- b) Draw the state diagram of the transaction.
- c) Write down use and syntax of GRANT command.
- d) Which are the schemes of the recovery from concurrent transactions?
- e) Which are the characteristics of big data?

P.T.O.

Q3) Attempt any two of the following:

[2×4=8]

- Explain variations of two phase locking.
- Define transaction. Explain ACID properties of transaction.
- Explain mandatory access control method.

Q4) Attempt any two of the following:

[2×4=8]

- Write a plpgsql function that accepts student credit out of 10 marks and returns grade based on eligibility as -
If credit is less than 5 → C grade
If credit is less than 7 → B grade
If credit is above 7 → A grade
- Consider the following transaction. Give two non-serial Schedules that the serializable.

T1	T2
Read(X)	Read(Y)
X=X+5000	Y=Y+2000
Write(X)	Write(Y)
Read(Y)	Read(Z)
Y=Y-1500	Z=Z-3100
Write(Y)	Write(Z)

- Explain encryption techniques used for database security.

Q5) Attempt any ONE of the following :

[1×3=3]

- Explain time stamp based protocol with read write conflicting conditions.
- Explain failure Classification

