Total No. of Questions : 8]

**PA-1486** 

SEAT No. :

[Total No. of Pages : 3

## [5926] 105

T.E. (Electronics / E & TC) DATABASE MANAGEMENT

(2019 Pattern) (Semester - I) (304183)

Time : 2<sup>1</sup>/<sub>2</sub> Hours]

[Max. Marks : 70

[6]

[5]

51 5:40.00

- Instructions to the candidates: 1) Attempt Q1 or Q.2, Q3 or Q.4, Q.5 or Q.6, and Q.7 or Q.8.
  - 2) Figures to the right indicate full marks.
  - 3) Assume suitable data, if necessary.

*Q1*) a) Consider the following database:

Student (Roll\_no; Name, motrine\_no; Address)

Subject (Sub\_Code, Sub\_name)

Marks (Roll\_no; Sub\_code, marks)

Write following queries in SQL.

- i) Average marks of each student along with Roll\_no. of student.
- ii) Find how many students have failed in the subject "DBM".
- b) Write the syntax for following SQL commands.
  - i) Create Table
  - ii) Alter Table
  - iii) Drop Table
  - iv) DELETE
  - v) UPDATE
- c) Explain following terms with examples.
  - i) Procedure 🕅
  - ii) Function

## OR

*Q2*) a)

- a) With the help of block diagram, describe PL/SQL block structure. [5]
  b) What are the different types of joins in SQL? Explain any one join with example. [6]
- c) Explain the following operations with suitable queries. [6]
  - i) Set operations (any two)
  - ii) Aggregate functions (any two)

<b>Q3</b> ) a)	Explain commit and Roll back operations of transaction.	[6]
b)	Explain how beadlock occurs? Which are the actions required the deadlock recovery process?	for the <b>[6]</b>
c)	Define the following terms.	[5]
	i) Concurrency	
	ii) Timestanto 5	
	iii) Timestamp ordering	
	iv) Schedule	
	v) Transaction	
	OR OR	
<b>Q4</b> ) a)	What are ACID properties of a transaction?	[6]
b)	Identify the following schedule is view serializable or not. Justif	y your
	answer.	[5]
	$T_1$ $T_2$ $T_3$	
		200
	Explain the transaction states with state diagram	
0)	Explain the transaction states with state diagram.	
<b>Q5)</b> a)	Explain client server architecture with suitable database application	on. <b>[6]</b>
b)	Draw two tier architecture and describe its advantages.	[6]
c)	Draw and explain memony structure of instance in oracle architect	ure. <b>[6]</b>
	OR CONT	
<b>Q6</b> ) a)	Describe speed up attribute in parallel database architecture.	[6]
b)	List the parallel database architectures and explain shave	d disk
	architecutre.	[6]
c)	Explain the intra query parallelism query evaluation technique.	[6]
[5926]-1	.05 2	

- Q7) a) List and explain advantages and disadvantages of distributed databases.[6]
  - b) Compare homogeneous and heterogeneous distributed database. [6]
  - c) Draw and explain client-server architecutre for DDBMS. [6]

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- Q8) a) Write the types of data fragmentation and explain horizontal fragmentation with one example. [6]
  - b) Explain the distributed database system failure modes (any two). [6]
  - c) Explain two phase commit protocol in distributed database. [6]