

Total No. of Questions : 10]

SEAT No. :

P2426

[4758] - 596

[Total No. of Pages :3

T.E. (I.T.)

**DATABASE MANAGEMENT SYSTEMS
(2012 Course) (Semester - I) (End-Sem.) (314443)**

Time : 2 ½ Hours]

[Max. Marks : 70

Instructions to the candidates:

- 1) *Answer Q1 or Q2, Q3 or Q4, Q5 or Q6, Q7 or Q8, Q9 or Q10.*
- 2) *Neat diagrams must be drawn wherever necessary.*
- 3) *Figures to the right side indicate full marks.*
- 4) *Use of Calculator is allowed.*
- 5) *Assume suitable data, if necessary.*

Q1) a) Explain ACID properties. [4]

- b) Construct an E-R diagram for a car insurance company that has a set of customers each of whom owns one or more cars. Each car has associated with it zero to any number of recorded accidents. [6]

OR

Q2) a) Explain different anomalies with example. [6]

- b) What is cursor? Explain cursor in PL/SQL with suitable example. [4]

Q3) a) Consider a relational database [8]

Supplier (Sid, Sname, address)

Parts (Pid, Pname, color)

Catalog (Sid, Pid, cost)

Write SQL queries for the following:-

- i) Find the names of suppliers who supply some red parts.

P.T.O.

- ii) Find the names of all parts whose cost is more than Rs. 250.
 - iii) Find name of all parts whose color is green.
 - iv) Find number of parts supplied by each supplier.
- b) Write short note on Embedded SQL. [2]

OR

Q4) When do dead lock happen? How to prevent them, how to recover if dead lock takes place. [10]

- Q5)** a) Why it is necessary to have client-server architecture for database management system. [6]
- b) Explain and state difference between centralized and client-server architecture. [8]
- c) Explain different issues in design of parallel system. [4]

OR

- Q6)** a) Explain need of partitioning techniques used in I/O parallelism. Explain techniques in detail. [8]
- b) What is distributed database. Discuss different approaches used for data storage in distributed database. [8]
- c) What are internet databases. [2]

- Q7)** a) Explain with example DTD. [6]
- b) Discuss HBase data Model. [5]
- c) Explain with syntax JSON data type and object. [5]

OR

- Q8)** a) Write a short note on. [6]
- i) X path
 - ii) X Query
- b) What is Hadoop Framework and on what concept the Hadoop Framework works. [8]
- c) Explain NOSQL databases. [2]

- Q9)** a) What is data preprocessing? Explain data preprocessing techniques. [8]
- b) Explain architecture of data mining system. [8]

OR

- Q10)** Write a short note on [16]
- i) Machine learning for Big data
 - ii) Mobile databases
 - iii) Data Mart
 - iv) KDD

