

Total No. of Questions : 6]

SEAT No. :

P3705

[Total No. of Pages : 2

Engg. - 53

T.E. (Information Technology) (Semester - I)

DATABASE MANAGEMENT SYSTEMS

(2012 Pattern) (In Sem.)

Time : 1 Hour]

[Max. Marks : 30

Instructions to the candidates:

- 1) *Answer Q1 or Q2, Q3 or Q4, Q5 or Q6.*
- 2) *Neat diagrams must be drawn wherever necessary.*
- 3) *Figures to the right indicate full marks.*
- 4) *Assume Suitable data if necessary.*

Q1) a) List five responsibilities of a database management system for each responsibility, explain the problems that would arise if the responsibility were not discharged. [5]

b) Explain the terms with proper example, primary key, Candidate key & superkey. Also comment on relation that exist among them. [5]

OR

Q2) a) Explain various components of DBMS system with the help of Diagram. [5]

b) What is Normalization? Define 2NF and 3NF with example. [5]

Q3) a) Suppose there are two relations R & S such that the foreign key r1 of R references primary key s1 of relation S. Describe how the trigger mechanism can be used to implement the “on delete cascade” option. [5]

b) What are different types of joins? Explain with proper example. [5]

OR

Q4) a) Describe circumstances under which you would choose to use Embedded SQL than normal SQL or only a general purpose programming Language. [4]

b) What do you mean by sub queries? Explain proper DML statements. [6]

P.T.O.

- Q5)** a) What is recoverable schedule? Why is recoverability of schedules desirable to allow non - recoverable schedules? [6]
b) Explain shadow copy and shadow paging. [4]

OR

- Q6)** a) What is transaction? Explain usefulness of ACID properties. [5]
b) Explain Log Based Protocol. [5]
