Total No. of Questions : 4]

SEAT No. : ____

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T.E. (E&TC) (Insem)
DATABASE MANAGEMENT
(2019 Pattern) (Semester - I) (304183)

Time : 1 Hour] ***[Max. Marks : 30***

Instructions to the candidates:

1) ***Solve Q1 or Q2, Q3 or Q4 from following questions.***
2) ***Neat diagrams must be drawn whenever necessary.***
3) ***Figures to right indicate full marks.***
4) ***Assume suitable data jf necessary.***

Q1) a) Explain the term Super key and Candidate key with example **[5]**

b) Construct an ER Diagram of Bank Management in which bank has the following : **[5]**

Description :
Bank have Customer.
Banks are identified by a name, code, address of main office.
Banks have branches.
Branches are identified by a branch_no., branch_name, address.
Customers are identified by name, cust-id, phone number, address.
Customer can have one or more accounts.
Accounts are identified by account_no., acc_type, balance.
Customer can avail loans.
Loans are identified by loan_id, loan_type and amount.
Account and loans are related to bank's branch.

c) Define the term Database Management System. Explain advantages of Database Management System over file system. **[5]**

OR

Q2) a) Explain with example any two fundamental operators in relational algebra. **[5]**

b) Explain with example how E-R diagram are converted into tables. **[5]**

c) Describe the three levels of data abstraction with suitable diagram and example? **[5]**

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Q3) a) Any database system to be good relational database system, CODD's has proposed 12 rules; explain any five rules proposed by CODD with example. **[5]**

b) List and explain any two constraints with example. **[5]**

c) Describe any two anomalies with an example. **[5]**

OR

Q4) a) Explain what is Normalization? Explain with example requirements of Third Normal Form. **[5]**

b) Describe the concept of Single Valued, Multivalued and transitive functional dependency. **[5]**

c) Explain any five features of good relational designs. **[5]**

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