## P-5041

## 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 if 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 :

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.
  - 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]

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]

[5]

- b) List and explain any two constraints with example.
- c) Describe any two anomalies with an example.

#### O. 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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A. 26.2006

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