

## DATABASE MANAGEMENT SYSTEMS

**Time :** 1Hour (3.30 PM to 4.30 PM)

**Marks :** 30 Marks (M)

**Day :** Monday

**Date :** 24 / 07 / 2017

**Instructions to Candidates :**

- 1) Solve any two questions from Q.1 or Q.2 and Q.3 or Q.4
- 2) Neat diagrams must be drawn wherever necessary
- 3) Figures to the right indicate full Marks

- Q.1** A) Explain the different data models used in DBMS with the help of example. **5M**
- B) What is meant by Mapping Cardinalities? Explain with diagrams **5M**
- C) Design an E-R model for online book shop database system. List the entity set & their primary Key. Extend the E-R Diagram using specialization. **5M**

**OR**

- Q.2** A) What is data abstraction? Explain the various levels of data abstraction in database. **5M**
- B) List the Advantage of a DBMS over file processing system. **5M**
- C) Draw the ER diagram which model university Database. List the entity sets & their primary key. Extend the ER diagram using aggregation to model the case where we want to record evaluations of a student by a guide on a project. **5M**

- Q.3** A) Consider Bank Relational Schema **10M**

<b>Customer</b> ( cust_name, cust_street, cust_city )	<b>Branch</b> ( branch_name, branch_city, assets )
<b>Account</b> ( Acc_no, branch_name, balance )	<b>Depositor</b> ( cust_name, acc_no )
<b>Loan</b> ( loan_no, branch_name, amount )	<b>Borrower</b> ( cust_name, loan_no )

Write the SQL queries for following requirements :

- i) Write Create table query for all above tables. ( 6 Marks )
- ii) Find the name and loan number of all customers having a loan at the Lonavala branch. ( 2 Marks )
- iii) Find all customers who have a loan at the bank but do not have an account at the bank. ( 2 Marks )

- B) Explain PL/SQL with the help of example. **5M**

**OR**

- Q.4** A) Consider relational schema **5M**
- Employee** ( Eno, Ename, Deptno, Salary )
- Department** ( Deptno, Dname )

Write SQL Queries for following questions

- i) List of employee names of 'Computer ' department.
- ii) Find the Employee whose Salary above 50000 of each department.
- iii) Find Department name of employee name 'Amit'.

- B) Differentiate between SQL and PL/SQL **5M**

- C) What is JOIN? Explain Different types of JOIN **5M**

\*\*\*\*\* ALL THE BEST \*\*\*\*\*