REG. NO									

MANIPAL INSTITUTE OF TECHNOLOGY
MANIPAL
A Constituent Institution of Manipal University

VI SEMESTER B.Tech DEGREE MAKE-UP EXAMINATIONS
CSE-3281 Database Management Systems (Open Elective)
24-06-2017

Duration: 3 Hours Max. Marks: 50

Instructions to Candidates

- Missing data may be suitably assumed.
- Draw diagrams wherever applicable

1. A What are the drawbacks of traditional file system and how is it overcome by DBMS. **4M**

   B. With the help of meaningful table examples, explain the various keys. **3M**

   C. What is specialization/generalization in tables? Explain and show how they are represented in relational schema. **3M**

2 A. What is ER diagram and how does it help the database design process? Show the ER notations for representing entity sets, relationships, weak entity sets and participation constraints. **4M**

   B. Show the use of set difference and natural join operators with the help of table examples. **2M**

   C. Explain the left outer join and right outer join relational algebra operations with the help of tables. **4M**

3. A. Explain any 6 attribute domain types allowed in SQL. **3M**

   B.

branch_name	account_number	Balance($)
udupi	101	500
udupi	102	650
mangalore	103	700
mangalore	104	450
Bangalore	110	330
Bangalore	121	780
Bangalore	123	660

For the above table ,Branch , write the SQL for the following queries
1. Find the highest balance in each branch
2. Find the number of accounts in each branch
3. Find the account numbers in Udupi or Mangalore whose balance lies in the range of 400 and 800

4. Find the account numbers which are odd or whose branch name contains the substring "lor". **4M**

C. Explain the "in", "having" and "some" clauses with examples. **3M**

4. A. Write SQL DDL commands to create an Instructor table with ID, Name, Department_name, salary and age as fields. ID uniquely identifies a row in the table, Department_name references another table department, age can NOT have null values and salary cannot be less than 50000. Write queries to
1. Display the number of instructors.
2. Display the instructor names whose salary is the range of 60000 and 100000. **3M**

B. What is 2NF? Explain the same with a table example which is not in 2NF. Convert this table to 2NF using 2NF principle. **3M**

C. With examples, explain the 3 major update anomalies present in the tables. **4M**

5. A. With a state diagram, explain the various states of transaction. Relate this to withdrawing cash in ATM. **3M**

B. What are the differences between serial and concurrent schedule? Explain with an example. Which is better for the performance of CPU and how? **5M**

C. Write a note on Lock based protocols. **2M**

****