**R09**

Code No: 09A40502

# JAWAHARLAL NEHRU TECHNOLOGICAL UNIVERSITY, HYDERABAD
**B.Tech II Year II Semester Examinations, June-2014**
**DATA BASE MANAGEMENT SYSTEMS**
(Common to CSE, IT)

Time: 3 hours                                                                        Max. Marks: 75

**Answer any five questions**
**All questions carry equal marks**
- - -

1.a) What are the advantages DBMS over file system?
 b) Explain the different roles of database administrators, application programmers and end users of a data base. Who needs to know most about data base systems?

2.a) Explain about specialization and generalization with suitable examples.
 b) Define key constraint, participation constraint. What is Weak entity? Give an example scenario motivating the use of each of these ER model design constructs.

3.a) What is the difference between tuple relational calculus and domain relational calculus?
 b) Explain the fundamental relational algebraic operations.

4.a) Explain the outer join operation.
 b) Write the SQL queries for the given database.
 Salesperson(SSN, name, startyear ,deptno)
 Trip(Trip_id, SSN, fromcity, tocity, departute_time,ret_date)
 Expense(Tripid,Accno,Amount)
 i) Give the details of trips that exceed $2000 in expense.
 ii) Print the SSN of salesman who took trips to "kuluManali".
 iii) Print the total trip expense incurred by salesman with SSN="S0123".

5.a) Why do we need normalization? Explain the difference between Third and Fourth normal forms with example.
 b) Explain about lossless join decomposition.

6. Define serializability. Explain conflict serializabilty and view serializability in detail.

7.a) How does recovery manager ensure atomicity of transactions? How does it ensures durability?
 b) Explain about log based recovery method.

8.a) Differentiate between primary and secondary indexing.
 b) What is B+ Tree? Explain the insertion operations in B+ tree indexing with example.

******