**Advance Data Management Technology**

**Analytical and Application Level Assignment -II**

**YEAR / SEM: BE/VII DATE: 10/10/2018**

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**MARKS: 100**

1. Discuss the factors that do not appear in centralized systems that affect concurrency control and recovery in distributed systems.
2. Consider the relational database schema

Suppose all the relations were created by (owned by) user X, who wants to grant the following privileges to user accounts A, B C, D and E.

EMPLOYEE (FNAME, MINIT, LNAME, SSN, ADDRESS, SEX,SALARY, SUPERSSN, DNO)

DEPARTMENT (DNAME, DNUMBER, MGRSSN, MGRSTARTDATE)

DEPENDENT (ESSN, DEPENDENT\_NAME, SEX, BDATE., RELATIONSHIP)

a. Account A can retrieve or modify any relation except dependent and grant any of these privileges to other users.

b. Account B can retrieve all the attributes of employee and department except for salary, mgrssn and mgrstartdate.

c. Account D can retrieve any attribute of EMPLOYEE or dependent and can modify DEPENDENT.

d. Write SQL statements to grant these privileges. Use views where appropriate.

1. The diversity of source systems poses a great challenge in the ETL process. Justify.
2. For a data warehouse having initial size of 500 GB, examine the options for server hardware, suggest which one you would choose for this data warehouse and justify your answer.
3. What is mean by the term heuristic optimization? Discuss the main heuristic that are applies during query optimization.