

## **Relational Data base management Systems-II (CSE-302, Dec-2005)**

**Note:** Section A is compulsory. Attempt any four questions from Section-B and any two from Section-C.

### **Section-A**

1. a) Define clustering.
- b) What are functions of File manager?
- c) Define the 2NF rule.
- d) What are the integrity rules?
- e) What are the advantages of E/R model?
- f) Discuss the differences between trivial and nontrivial dependencies.
- g) Define parameterized cursors.
- h) Discuss the various types of triggers.
- i) What is the difference between function and procedure?
- j) Discuss the advantages of relational algebra.

### **Section-B**

2. The following relations structures are given:-  
S(S#, SNAME, STATUS, CITY) PRIMARY KEY(S#)  
P(P#, PNAME, COLOR, WEIGHT, CITY) PRIMARY KEY(P#)  
SPJ (S#, P#, J#, QTY) PRIMARY KEY (S#, P#, J#)  
FOREIGN KEY (S#) REFERENCES S  
FOREIGN KEY (S#) REFERENCES P  
FOREIGN KEY (J#) REFERENCES J
- a. Write a command to get project numbers for projects supplied with at least all parts available from supplier S1.
- b. Write a command to get supplier numbers for suppliers who supply the same part to all projects.
- c. Write a PL-SQL to get part numbers of parts supplied to some project in an average quantity of more than 320.
- d. Create a view consisting of supplier tuples for suppliers that are located in London.
- e. What are 1NF, 2NF and 3NF rules?

### **Section-C**

7. Discuss the architecture of Database system.
8. Discuss various types of security methods to be established in RDBMS.
9. A relation TIME TABLE is defined with the following attributes:  
D Day of the week (1-5)  
P Period within Day (1-8)  
C Classroom number  
T Teacher name  
L Lesson name  
The tuple {D:d, P:p, C:c, T:t, L:l} is an element of this relation if and only if at time {D:d, P:p} lesson 1 is taught by teacher t in classroom c. You can assume that lessons are on period in duration and that every lesson has a lesson name that is unique with respect to all lessons taught in the week. What functional dependencies hold in this relation, What are the candidate keys.