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.