Computer and Information Science 631

Database Management System Design
Sample Midterm Examination

1   Database Querying

Consider the database consisting of 3 relations:
Parent_Child(Parent_SSN, Child_
SSN) Person (SSN, Name, Age,
Gender) School(Child_SSN,
School Name)
The table Person contains all the people in the database, the table Parent Child links each child with his/her parents and vice versa, the table School list the children that are still in school along with the school name.

Express the following queries (I) in Algebra (1 to 4), (II) in SQL (all).

1. List the children of John

2. List the grand parents of Peter

3. List the parents that have at least one child in the Riverdale school

4. List the parents that have all their children in the Riverdale school.

5. List the parents that have no children in the Riverdale school.

6. List couples (female, male) that have at least one child in the Riverdale school.

7. List couples (female, male) that have all their children in the Riverdale school [5 extra points for this].