Write Nested queries to solve the following

1. Find courses offered in Fall 2009 and in Spring 2010
2. Find courses offered in Fall 2009 but not in Spring 2010
3. Find the total number of (distinct) students who have taken course sections taught by the instructor with *ID 101*
4. Find names of instructors with salary greater than that of some (at least one) instructor in the Mechanical department.
5. Find the names of all instructors whose salary is greater than the salary of all instructors in the Mechanical department.
6. Find the average instructors’ salaries of those departments where the average salary is greater than $42,000. [**Hint: Use nested sub query in the from clause**]
7. Find all departments with the maximum budget [**Hint: Use with clause**]
8. Find all departments where the total salary is greater than the average of the total salary at all departments [**Hint: Use with clause**]