**A:08**

1. List the student ID of the student that has enrolled in the most sections of 100 level courses (100 - 199).

**SELECT student\_id** **, COUNT(section\_id) AS "Most Sections Taken"**

**FROM enrollment**

**WHERE section\_id BETWEEN 100 AND 199**

**HAVING COUNT(student\_id) =**

**(SELECT MAX(COUNT(student\_id))**

**FROM enrollment**

**GROUP BY student\_id)**

**GROUP BY student\_id;**

1. Provide the student\_id and name of the student(s) that scored highest on the final exam (FI) in course 230 section 99.

**SELECT s.student\_id, s.first\_name, s.last\_name, t.course\_no, t.section\_id,**

**MAX(g.numeric\_grade) AS "Highest Final Exam"**

**FROM student s, grade g, section t**

**WHERE s.student\_id = g.student\_id**

**AND g.section\_id = t.section\_id**

**AND g.numeric\_grade =**

**(SELECT MAX(numeric\_grade)**

**FROM grade**

**WHERE grade\_type\_code = 'FI')**

**AND g.grade\_type\_code = 'FI'**

**AND t.section\_id = '99'**

**AND t.course\_no = '230'**

**GROUP BY s.student\_id, s.first\_name, s.last\_name, t.course\_no, t.section\_id**

**ORDER BY s.student\_id;**

1. List the name and phone number of instructors who have never taught a course section.

**SELECT instructor\_id, first\_name, last\_name**

**FROM instructor**

**WHERE instructor\_id NOT IN**

**(SELECT instructor\_id**

**FROM section)**

**ORDER BY instructor\_id;**

1. Generate an alphabetic listing containing the last names and final exam grade (FI) of students who scored above average on the final exam for section 89.

**SELECT g.section\_id, s.last\_name,**

**g.grade\_type\_code, g.numeric\_grade**

**FROM student s, grade g**

**WHERE (s.student\_id = g.student\_id)**

**AND (g.section\_id = 89)**

**AND (g.grade\_type\_code = 'FI')**

**AND (g.numeric\_grade >**

**(SELECT AVG(numeric\_grade)**

**FROM grade))**

**ORDER BY s.last\_name;**

1. List the course number and course description of the course with the highest number of enrolled students.

**SELECT course\_no, description**

**FROM course**

**WHERE course\_no =**

**(SELECT course\_no**

**FROM section**

**WHERE section\_id IN**

**(SELECT DISTINCT section\_id**

**FROM enrollment)**

**GROUP BY course\_no**

**HAVING COUNT(course\_no) =**

**(SELECT MAX(COUNT(course\_no))**

**FROM section**

**WHERE section\_id IN**

**(SELECT DISTINCT section\_id**

**FROM enrollment)**

**GROUP BY course\_no));**

1. List course number and course description for all courses that don’t have at least one 9:30AM section.  Sort by course number.

**SELECT course\_no, description**

**FROM course**

**WHERE course\_no NOT IN**

**(SELECT course\_no**

**FROM section**

**WHERE TO\_CHAR(start\_date\_time, 'HH:MI') = '9:30')**

**ORDER BY course\_no;**

1. List the student\_id and last name of the students who received an above average grade on Quiz #3 in section 120.

**SELECT s.student\_id, s.last\_name, g.numeric\_grade**

**FROM grade g, student s**

**WHERE g.student\_id = s.student\_id**

**AND grade\_type\_code = 'QZ'**

**AND g.grade\_code\_occurrence = '3'**

**AND g.section\_id = 120**

**AND g.numeric\_grade >**

**(SELECT AVG(numeric\_grade)**

**FROM grade**

**WHERE grade\_type\_code = 'QZ'**

**AND grade\_code\_occurrence = 3**

**AND section\_id = 120)**

**ORDER BY s.student\_id;**

1. List the student id, last name and the final exam grade for students in section 142.

**SELECT s.student\_id, g.section\_id,**

**s.last\_name, g.numeric\_grade**

**FROM student s, grade g**

**WHERE s.student\_id = g.student\_id**

**AND s.student\_id IN**

**(SELECT e.student\_id**

**FROM enrollment e, section s**

**WHERE e.section\_id = s.section\_id)**

**AND g.grade\_type\_code = 'FI'**

**AND g.section\_id = 142;**

1. List the names of students who have taken both the Systems Analysis class and the Project Management class.

**SELECT last\_name, first\_name**

**FROM student**

**WHERE student\_id IN**

**(SELECT DISTINCT student\_id**

**FROM enrollment**

**WHERE section\_id IN**

**(SELECT section\_id**

**FROM section**

**WHERE course\_no IN**

**(SELECT course\_no**

**FROM course**

**WHERE description = 'Systems Analysis'**

**AND description = 'Project Management')))**

**ORDER BY last\_name;**

1. List the instructor name, course number and course description of the Java courses that have been taught by the Instructor that has taught the most Java courses.

**SELECT s.course\_no, i.instructor\_id, i.last\_name, i.first\_name**

**FROM instructor i, section s**

**WHERE s.instructor\_id = i.instructor\_id**

**AND s.course\_no IN**

**(SELECT course\_no**

**FROM course**

**WHERE description LIKE '%Java')**

**GROUP BY s.course\_no, i.instructor\_id, i.last\_name, i.first\_name**

**ORDER BY i.instructor\_id, s.course\_no;**

1. List the names of instructors who have not used projects (PJ) as a basis for grading in their courses.

**SELECT last\_name, first\_name**

**FROM instructor**

**WHERE instructor\_id NOT IN**

**(SELECT s.instructor\_id**

**FROM section s, grade g**

**WHERE s.section\_id = g.section\_id**

**AND g.grade\_type\_code = 'PJ')**

**ORDER BY last\_name;**

1. Determine the number of students who received a below average grade on the final exam (FI) in section 86.

**SELECT COUNT(\*) AS "Total Student Below Average"**

**FROM grade**

**WHERE section\_id = 86**

**AND grade\_type\_code = 'FI'**

**AND numeric\_grade <**

**(SELECT AVG(numeric\_grade)**

**FROM grade**

**WHERE grade\_type\_code = 'FI'**

**AND section\_id = 86);**

1. List the city and state that have the highest number of students enrolled.

**SELECT city, state**

**FROM zipcode**

**WHERE zip =**

**(SELECT zip**

**FROM student**

**WHERE student\_id IN**

**(SELECT DISTINCT student\_id**

**FROM enrollment)**

**GROUP BY zip**

**HAVING COUNT(zip) =**

**(SELECT MAX(COUNT(zip))**

**FROM student**

**WHERE student\_id IN**

**(SELECT DISTINCT student\_id**

**FROM enrollment)**

**GROUP BY zip));**

1. Provide the student\_id, name and final exam grade of the student(s) that scored highest on the final exam (FI) in course section 81.

**SELECT s.student\_id, s.last\_name, s.first\_name, g.numeric\_grade AS "Highest Final Exam"**

**FROM student s, grade g**

**WHERE s.student\_id = g.student\_id**

**AND s.student\_id =**

**(SELECT student\_id**

**FROM grade**

**WHERE numeric\_grade =**

**(SELECT MAX(numeric\_grade)**

**FROM grade**

**WHERE section\_id = 81**

**AND grade\_type\_code = 'FI')**

**AND section\_id = 81**

**AND grade\_type\_code = 'FI')**

**AND section\_id = 81**

**AND grade\_type\_code = 'FI';**

1. List the student id and name of students who have taken the same course more than once .

**SELECT student\_id, last\_name, first\_name**

**FROM student**

**WHERE student\_id IN**

**(SELECT e.student\_id**

**FROM enrollment e, section s**

**WHERE s.section\_id = e.section\_id**

**HAVING COUNT(s.course\_no) > 1**

**GROUP BY e.student\_id, s.course\_no)**

**ORDER BY student\_id, last\_name;**