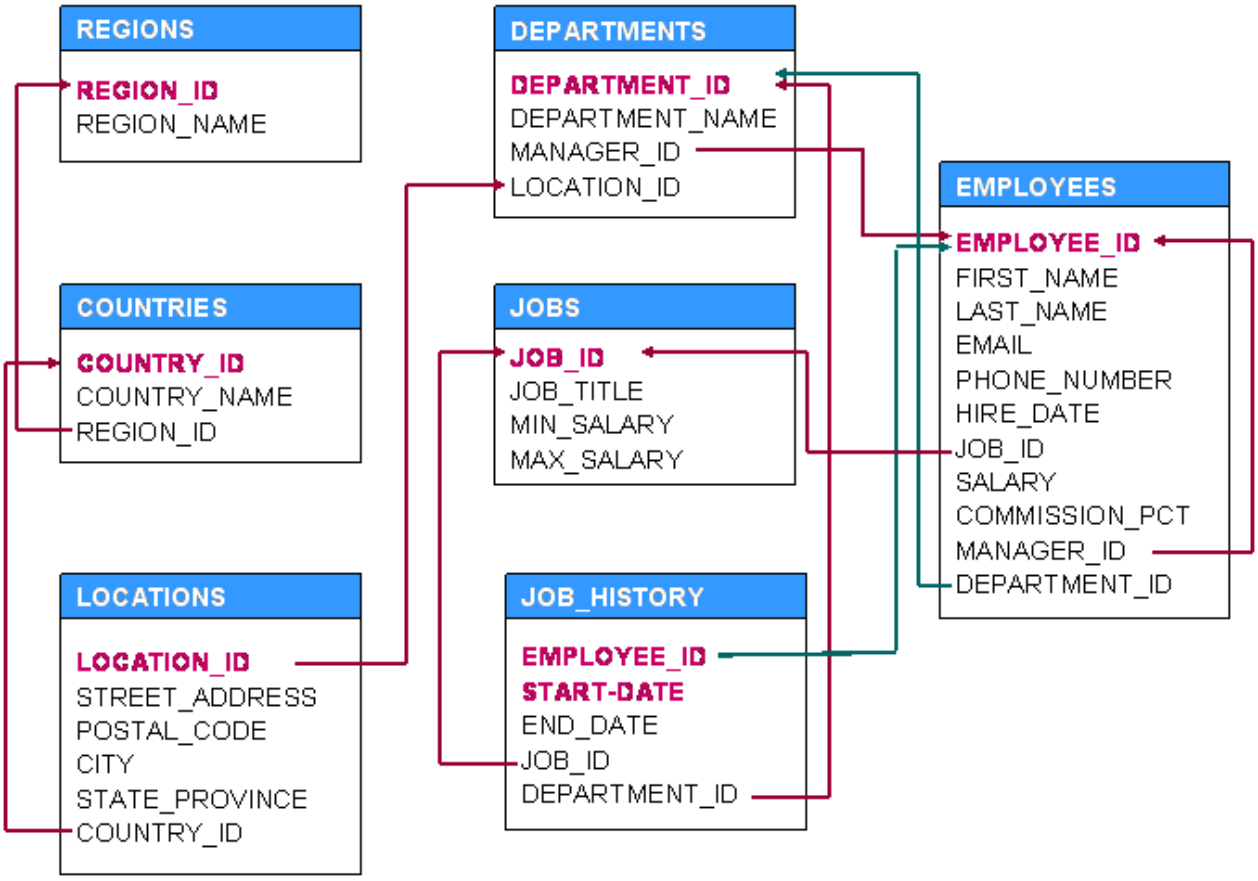

For all the questions given below, Write MySQL and Oracle SQL Statements that will generate output exactly according to the requirements. [4 * 29 = 116]

1) Display number of employees joined after 15th of the month.
2) Display the country ID and number of cities we have in the country.
3) Display average salary of employees in each department who have commission percentage.
4) Display job ID, number of employees, sum of salary, and difference between highest salary and lowest salary of the employees of the job.
5) Display job ID for jobs with average salary more than 10000.
6) Display years in which more than 10 employees joined.
7) Display departments in which more than five employees have commission percentage.
8) Display employee ID for employees who did more than one job in the past.
9) Display job ID of jobs that were done by more than 3 employees for more than 100 days.
10) Display department ID, year, and Number of employees joined.
11) Display departments where any manager is managing more than 5 employees.
12) Display department name, manager name, and city.

13) Display country name, city, and department name.

14) Display job title, department name, employee last name, starting date for all jobs from 2000 to 2005.

15) Display job title and average salary of employees

16) Display details of jobs that were done by any employee who is currently drawing more than 15000 of salary.

17) Display department name, manager name, and salary of the manager for all managers whose experience is more than 5 years.

18) Display employee name, job title for the jobs employee did in the past where the job was done less than six months.

19) Display department name, average salary and number of employees with commission within the department.

20) Display the month in which more than 5 employees joined in any department located in Sydney.

21) Display details of departments in which the maximum salary is more than 10000.

22) Display jobs into which employees joined in the current year.

23) Display employees who did not do any job in the past.

24) Display job title and average salary for employees who did a job in the past.

25) Display country name, city, and number of departments where department has more than 5 employees.

26) Display details of manager who manages more than 5 employees.

27) Display the departments into which no employee joined in last two years.

28) Display the details of departments in which the max salary is greater than 10000 for employees who did a job in the past.

29) Display third highest salary of all employees

PL/SQL Programs

1) Find out the name of the employee and name of the department for the employee who is managing for employee 103. [5 Points]

2) Display the year in which maximum number of employees joined along with how many joined in each month in that year. [5 Points]

3) Change salary of employee 130 to the salary of the employee with first name ‘Joe’. If Joe is not found then take average salary of all employees. If more than one employee with first

name ‘Joe’ is found then take the least salary of the employees with first name Joe. [Use Exceptions] [10 Points]

4) Display Job Title and Name of the Employee who joined the job first day.

[Use Cursors and Exceptions] [20 Points]

5) Ensure no changes can be made to EMPLOYEES table before 6am and after 10pm in a day.

[20 Points]

6) Whenever the job is changed for an employee write the following details into job history. Employee ID, old job ID, old department ID, hire date of the employee for start date, system date for end date. But if a row is already present for employee job history then the start date should be the end date of that row +1. [25 Points]

Below PL/SQL Program are not related to the schema provided in this Assignment set above.

7) What output is displayed when the following PL/SQL block is executed? Kindly don't execute the code directly and try to figure it out on your own. Also explain why this output will occur. Also explain each and every new term which is used here and we haven't discuss in the class. Please note, Assignment will not be graded, if you fail to explain the code. [25 Points]

```
DECLARE
   CURSOR no_data
   IS
      SELECT dummy
        FROM DUAL
       WHERE 1 = 2;

   var   VARCHAR2 (1);

   TYPE tabtype IS TABLE OF no_data%ROWTYPE
                       INDEX BY BINARY_INTEGER;

   tab   tabtype;
BEGIN
   var := 'Z';

   OPEN no_data;
   FETCH no_data INTO var;
   CLOSE no_data;

   DBMS_OUTPUT.put_line (NVL (var, 'null'));

   tab (1).dummy := 'Z';

   OPEN no_data;
   FETCH no_data BULK COLLECT INTO tab;
   CLOSE no_data;

   DBMS_OUTPUT.put_line (tab (1).dummy);
EXCEPTION
   WHEN NO_DATA_FOUND
   THEN
     DBMS_OUTPUT.put_line ('NDF');
END;
```

8) What happens when a table on which Procedure is based on is deleted or changed? Explain your answer and also, how to rectify it [5 Points]

9)

```
CREATE OR REPLACE PROCEDURE Discount
AS
  CURSOR c_group_discount
  IS
    SELECT DISTINCT s.course_no,
      c.description
    FROM section s,
      enrollment e,
      course c
    WHERE s.section_id = e.section_id
    AND c.course_no    = s.course_no
    GROUP BY s.course_no,
      c.description,
      e.section_id,
      s.section_id
    HAVING COUNT(*) >=8;
BEGIN
  FOR r_group_discount IN c_group_discount
  LOOP
    UPDATE course
    SET cost        = cost * .95
    WHERE course_no = r_group_discount.course_no;
    DBMS_OUTPUT.PUT_LINE ('A 5% discount has been given to '||
r_group_discount.course_no||' '|| r_group_discount.description );
  END LOOP;
END;
```

9.1 What will be the output when the above procedure is executed, also explain it – step by step?

9.2 The script does not contain a COMMIT. Discuss the issues involved with placing a COMMIT in the procedure, and indicate where the COMMIT could be placed.

9.3 Write a SELECT statement to display the source code for the Discount procedure.

[15 Points]

10) Write a procedure with no parameters.The procedure should say whether the current day is a weekend or weekday. Additionally, it should tell you the user's name and the current time. It also should specify how many valid and invalid procedures are in the database.