PART-III

1. Who is the highest paid C programmer

```
SQL > select
      pname
      from programmer
      where salary = (select
                      max(salary)
                      from programmer
                      where prof1 = 'C' or prof2 = 'C');
```

2. Who is the highest paid female cobol programmer.

```
SQL> select
     pname
     from programmer
     where salary = (select
                     max(salary)
                     from programmer
                     where prof1 like 'Cobol' or prof2 like
                     'Cobol')
     and gender = 'F';
```

3. Display the name of the highest paid programmers for each language (prof1)

```
SQL> select
     pname, salary, prof1
     from programmer
     where salary in (select
                      max(salary)
                      from programmer
                      group by prof1);
```

4. Who is the least experienced programmer.

```
SQL> select
        pname
        from programmer
        where ((sysdate-doj)/365) = (select
                                        min((sysdate-doj)/365)
                                        from programmer);
```

5. Who is the most experienced male programmer knowing pascal.

```
SQL> select
        pname, (sysdate-doj)/365
        from programmer
        where gender = 'M' and
        (sysdate-doj)/365 = (select
                                max((sysdate-doj)/365)
                                from programmer
                                where prof1 = 'Pascal' or
                                prof2 = 'Pascal');
```

6. Which language does only one programmer know.

```
SQL> select
        prof1
        from programmer
        group by prof1
        having prof1 not in (select
                                prof2
                                from programmer)
        and count(prof1)=1
        union
        select
        prof2
        from programmer
```

```
group by prof2
having prof2 not in (select
                        prof1
                        from programmer)
and count(prof2)=1;
```

7. Who is the above programmer.

```
SQL> select
     pname
     from programmer
     where prof1 in (select
                     prof1
                     from programmer
                     group by prof1
                     having prof1 not in (select
                                          prof2
                                          from programmer)
                     and count(prof1)=1
                     Union
                     select
                     prof2
                     from programmer
                     group by prof2
                     having prof2 not in (select
                                          prof1
                                          from programmer)
                     and count(prof2)=1);
```

8. Who is the youngest programmer knowing dbase.

```
SQL> select
       pname
       from programmer
       where (sysdate-dob)/365 = (select
                                    min((sysdate-dob)/365)
                                    from programmer
                                    where prof1 = 'Dbase'
                                    or prof2 = 'Dbase');
```

9. Which female programmer earning more than 3000 doesn't know c, c++, oracle or dbase.

```
SQL> select
       pname
       from programmer
       where gender = 'F' and
       salary > 3000 and
       (prof1 not in ('C', 'C++', 'Oracle', 'Dbase') or
        prof2 not in ('C', 'C++', 'Oracle', 'Dbase'));
```

10. Which institute has the most number of students.

```
SQL> select
       Splace
       from studies
       group by Splace
       having count (Splace) = (select
                                  max(count(Splace))
                                  from studies
                                  group by Splace);
```

11. Which course has been done by most of the students.

```
SQL> select
        course, count(*)
        from studies
        group by course
        having count(*)= (select
                          max(count(*))
                          from studies
                          group by course);
```

12. Display the names of institute and course which has below average course fee.

```
SQL> select
        splace, course
        from studies
        where cost< (select
                     avg(cost)
                     from studies);
```

13. Which is the costliest course.

```
SQL> select
        course
        from studies
        where cost = (select
                      max(cost)
                      from studies);
```

14. Which institute conducts the costliest course.

```
SQL> select
        splace
        from studies
        where cost = (select
                      max(cost) from studies);
```

15. Which course has the below average number of students.

```
SQL> select
     course
     from studies
     group by course
     having count(course) < (select
                             avg (count (course))
                             from studies
                             group by course);
```

16. Which institute conducts the above courses.

```
SQL> select
     Splace
     from studies
     where course in (select
                      course
                      from studies
                      having count(pname)<
                          (select
                           avg (count(pname))
                           from studies
                           group by course)
                      group by course);
```

17. Display the number of courses whose fee are within the average fee.

21. Which language was used to develop the package which has the highest sales amount.

```
SQL> select
        dev_d
        from software
        where scost = (select
                        max(scost)
                        from software);
```

22. Display the package that has the least difference between development and selling cost.

```
SQL> select
        title
        from software
        where dcost - scost = (select
                                min(dcost - scost)
                                from software);
```

23. Which is the costliest package developed in Pascal.

```
SQL> select
        title
        from software
        where dcost = (select
                        max (dcost)
                        from software
                        where dev_d = 'Pascal');
```

24. Which language was used to develop the most number of program packages.

```
SQL> select
        dev_d
        from software
        group by dev_d
        having dev_d = (select
```

```
                max(dev_d)
                from software);
```

25. Which programmer has developed the highest number of packages.

```
SQL> select
        pname
        from software
        group by pname
        where count(pname) = (select
                              max(count(pname))
                              from software);
```

26. Who is the author of the costliest package.

```
SQL> select
        pname, title
        from software
        where dcost = (select
                       max(dcost)
                       from software);
```

27. Display the names of the packages which have sold less than the average number of copies.

```
SQL> select
        title, sold
        from software
        where sold < (select
                      avg(sold)
                      from software);
```

28. Who are the authors of the packages who have recovered more than the double the development cost.

```
SQL> select
        pname
        from software
        where scost *sold > 2 *dcost;
```

29. Display the programmers name and his cheapest package developed by him in each language.

```
SQL> select
        pname, title, dev_d, dcost
        from software
        where (dev_d, dcost) in (select
                                    dev_d, min(dcost)
                                    from software
                                    group by dev_d);
```

30. Display the language used by each programmer to develop the highest selling and lowest selling package.

```
SQL> select
        pname, dev_d
        from software
        where sold in (select
                          max(sold)
                          from software
                          group by pname
                          Union
                          select
                          min(sold)
                          from software
                          group by pname);
```

31. Who is the youngest male programmer born in 1965.

```
SQL> select
        pname
        from programmer
        where (sysdate-dob)/365 = (select
                                   min((sysdate-dob)/365)
                                   from programmer
                                   where gender='M'
                                   and substr(dob,7,4)
                                   ='1965');
```

32. Who is the oldest female programmer joined in 1982.

```
SQL> select
        pname
        from programmer
        where (sysdate-doj)/365 = (select
                                   max((sysdate-doj)/365)
                                   from programmer
                                   where gender='F'
                                   and substr(doj,7,4)
                                   ='1982');
```

33. In which year did most of the programmers join.

```
SQL> select
        substr(doj,7,4)
        from programmer
        group by substr(doj,7,4)
        having count(*)= (select
                          max(count(*))
                          from programmer
                          group by substr(doj,7,4));
```

34. Display the details of those who will be completed 20 years of service this year.

```
SQL> select
        *
        from programmer
        where (sysdate-doj)/365 >20;
```

35. Calculate the amount to be recovered for those packages whose development cost has not yet been recovered.

```
SQL> select
        pname, title, dcost-(sold*scost)
        from software
        where dcost-(sold*scost)>0;
```

36. List the packages which have not been sold so far.

```
SQL> select
        title
        from software
        where sold=0;
```

37. Findout the cost of the software developed by mary.

```
SQL> select
        scost
        from software
        where pname='Mary';
```

38. Display the institute name from studies table without duplicates.

```
SQL> select
        splace
        from studies
        group by splace
        having count(*)=1;
```

39. How many different courses are mentioned in studies table.

```
SQL> select
        distinct (course)
        from studies;
```

40. Display the names of programmers whose names contains 2 occurances of letter 'a'.

```
SQL> select
        pname
        from programmer
        where pname like '%a%a%';
```

41. Display the names of programmers whose names contains upto 5 characters.

```
SQL> select
        pname
        from programmers
        where length(pname)<6;
```

42. How many female programmers knowing cobol have more than 2 years of experience.

```
SQL> select
        pname
        from programmer
        where gender = 'F'
        and (prof1 in 'Cobol' or prof2 in 'Cobol')
        and (sysdate - doj) /365 > 2;
```

43. What is the length of the shortest name in programmers table.

```
SQL> select
        length(pname)
        from programmer
        where length(pname) = (select
                                min(length(pname))
                                from programmer);
```

44. What is the average development cost of a package developed in Cobol.

```
SQL> select
        avg(dcost)
        from software
        where dev_d = 'Cobol';
```

45. Display the name, gender, dob (dd/mmm/yy format), doj (dd/mmm/yy format) for all programmers without using the conversion function.

```
SQL> select
        pname, gender, substr(dob,1,2) || '/'
        substr(dob,4,2) || '/' || substr(dob,7,4) dob,
        substr(doj,1,2) || '/' || substr(doj,4,2) || '/'
```

```
|| substr(doj,7,4) doj
from programmer;
```

46. Who are the programmers who were born on the last day of the month.

```
SQL> select
        pname, doj
        from programmer
        where substr(dob,1,2) in ('01','03','05','07','08',
        '10','12') and substr(dob,4,2) = '30'
        or substr(dob,1,2) in ('07','06','09','11') and
        substr(dob,4,2) = '30'
        or substr(dob,1,2) in ('02') and substr(dob,4,2)
        = '28' or substr(dob,4,2) = '29';
```

47. What is the amount paid salaries of male programmers who don't know cobol.

```
SQL> select
        pname, salary
        from programmers
        where gender = 'M' and
        (prof1 != 'Cobol' or prof2 != 'Cobol');
```

48. Display the title, scost, dcost and difference between scost and dcost in descending order of difference.

```
SQL> select
        title, scost, dcost, dcost-scost
        from software
        order by 4 desc;
```

49. Display the names of the packages whose name contain more than one word.

```
SQL> select
        title
        from software
        where title like '% %';
```

50. Display the name, job, dob, doj of those month of birth and month of joining are same.

Part-IV

1. Display the details of those who are drawing the same salary.

```
SQL> select
        p1.pname, p1.salary, p2.pname, p2.salary
        from programmer p1, programmer p2
        where p1.pname != p2.pname and
        p1.salary = p2.salary
        order by p1.salary;
```

2. Display the details of software developed by male programmers earning more than 3000.

```
SQL> select
        s.*
        from programmer p, software s
        where p.pname = s.pname and
        p.gender = 'M' and p.salary > 3000;
```

3. Display the details of the packages developed in pascal by female programmers.

```
SQL> select
        s.*
        from programmer p, software s
        where p.pname = s.pname and p.gender = 'F'
        and dev_d = 'Pascal';
```

4. Display the details of software developed in c by female programmers of pragathi.

```
SQL> select
        *
        from software
        where pname in (select
                        pname from studies
                        where splace = 'Pragathi'
                        and pname in (select
                                      pname
                                      from programmer
                                      where gender='F')
                        and gendev_d = 'c');
```

5. Display the number of packages, number of copies sold and sales value of each programmer institute wise.

```
SQL>select
      t1.*, t2.splace
      from (select
            pname, count(*) packages, sum(sold)
            copies, sum(scost*sold) sales from
            software
            group by pname) t1, studies t2
    where t1.pname = t2.pname
    order by t2.splace;
```

6. Display the details of the software developed in dbase by male programmers who belong to the institute in which most number of programmer studied.

```
SQL> select
        s.*
        from programmer p, studies st, softwares s
        where s.pname = st.pname and s.pname=
         p.pname and p.pname = st.pname and
         p.gender = 'M' and s.dev_d = 'Dbase' and
         st.splace = (select
                        splace
                        from studies
                        group by splace
                         having count (pname)
                          = (select
                              max(count (pname))
                              from studies
                               group by splace));
```

7. Display the details of software developed by male programmers whose salary is less 2500 and female programmers whose salary is greater than 2500.

```
SQL> select
        S.*
        from programmer p, softwares
        where s.pname = p.pname and
        ((p.gender = 'M' and p.salary < 2500) or
         (p.gender = 'F' and p.salary > 2500));
```