

Section-B(PL/SQL)

16. Write a PL/SQL program to raise the employee salary by 30%, who have completed their 40 years of service.

```

declare
cursor c3 is select * from emp where
extract(year from sysdate)-extract(year from hiredate)>40 for update;
e emp%rowtype;

begin
    open c3;
    loop
    fetch c3 into e;
    exit when c3%notfound;
    update emp set sal=e.sal+ (30/100) *e.sal where current of c3;
    end loop;
    close c3;
end;
/

```

17. Write a PL/SQL program to check the given number is Armstrong 'or' not.

```

declare
n number(3);
s number(3) :=0;
t number(3);
begin
n: =&n;
t: =n;
while t>0 loop
s: =s+power((t mod 10),3);
t: =trunc(t/10);
end loop;
if(s=n) then
dbms_output.put_line('The given number ' || n || ' is an armstrong number');
else
dbms_output.put_line('The given number ' || n || ' is not an armstrong
number');
end if;
end;
/

```

18. Write a PL/SQL program to display top 10 rows in emp table based on their job and salary.

```

declare
    cursor c1 is select * from emp order by sal desc;
    e emp%rowtype;

begin
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```

```

open c1;
loop
fetch c1 into e;
exit when c1%rowcount=11 or c1%notfound;
dbms_output.put_line('top : '||c1%rowcount||' employee');
dbms_output.put_line('employee no:'||e.empno);
dbms_output.put_line('employee name'||e.ename);
dbms_output.put_line('employee job is '||e.job);
dbms_output.put_line('employee salary is '||e.sal);
dbms_output.put_line('*-*-*-*-*-*-*-*-*-*-*-*-*-*-*');
end loop;
end;
/

```

19. Write a PL/Sql program to swap two numbers without using third variable.

```

declare
a number(3);
b number(3);
begin
a: =&a;
b: =&b;
dbms_output.put_line('before swapping a= '||a||' and b= '||b);
a: =a+b;
b: =a-b;
a: =a-b;
dbms_output.put_line('after swapping a= '||a||' and b= '||b);
end;
/

```

20. The hrd manager has decided to raise the employee salary by 20%. Write a PL/Sql block to accept the employee number and update the salary of that employee. Display appropriate message based on the existence of the record in emp table.

```

declare
e emp%rowtype;
no emp.empno %type;
sa emp.sal%type;
begin
no: =&no;
select * into e from emp where empno=no;
sa: =e.sal+(15/100)*e.sal;
update emp set sal=sa where empno=no;
dbms_output.put_line('employee record is modified');
dbms_output.put_line('employee number is '||e.empno);
dbms_output.put_line('employee name is '||e.ename);
dbms_output.put_line('employee job is '||e.job);
dbms_output.put_line('employee sal is '||sa);
end;
/

```

21. Write a PL/SQL program to generate multiplication tables for 3 & 7.

```

declare
  i number(3);
begin
  i:=1;
  for i in 1..10 loop
    dbms_output.put_line(3||' * '||i||' = '||3*i);
  end loop;
  dbms_output.put_line('*****');
  for i in 1..10 loop
    dbms_output.put_line(7||' * '||i||' = '||7*i);
  end loop;
end;
/

```

22. Write a PL/SQL program to display the given number is prime or not?

```

DECLARE
  n number := &n;
  j number := 2;
  counter number := 0;
BEGIN
  WHILE(j <= n/2) loop
    if mod(n,j)=0 then
      dbms_output.put_line(n || ' is not prime number');
      counter := 1;
      exit ;
    else
      j := j+1;
    end if;
  end loop;

  if counter=0 then
    dbms_output.put_line( n || ' is a prime number');
  end if;
end;

```

23. Write a PL/SQL trigger on the emp table when ever an update is performed on the emp table.

```

create or replace trigger emp_trig
before update on emp
for each row
begin
  if (:new.sal > 10000) then
    raise_application_error(-20000, 'Not allowed to update');
  end if;
end if;
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```
end;
```

```
SQL> update emp
      Set sal=15000;
```

24. Write a PL/Sql program to raise the employee salary by 10% , for department number 30 people and also maintain the raised details in the raise table.

```
create table raise_emp
(empid number(4) primary key,
name varchar2(10),
desig varchar2(9),
mgr number(4),
doj date,
salary number(7,2),
comm number(7,2),
dno number(2));
```

```
declare
  cursor c2 is select * from emp where deptno=30 for update;
  e emp%rowtype;
begin
  open c2;
  loop
  fetch c2 into e;
  exit when c2%notfound;
  update emp set sal=e.sal+(10/100)*e.sal where current of c2;
  end loop;
  dbms_output.put_line('employee details are stored in the emp_raise
table');
  insert into raise_emp(select * from emp where deptno=30);
  close c2;
end;
/
```

25. Write a procedure to update the salary of employee, who are not getting commission 9% .

```
create or replace procedure raise_comm
as
begin
update emp set sal=sal+(10/100)*sal where comm is null or comm=0;
end;
/
```

26. Write PL/Sql program to check the given string is palindrome or not.

```
declare
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```

```

s1 varchar2(20);
s2 varchar2(20);
begin
s1:='&s1';
select reverse(s1) into s2 from dual;
if s1=s2 then
dbms_output.put_line('given string is palindrome');
else
dbms_output.put_line('given string is not palindrome');
end if;
end;
/

```

27. Write a PL/Sql procedure to prepare a telephone bill by using following table. And print the monthly bills for each customer

Table used : phone.

Name	null?	Type
Tel_no	not null	number(6)
Cname		varchar2(20)
City		varchar2(10)
Pr_read		number(5)
Cur_read		number(5)
Net_units		number(5)
Tot_amt		number(8,2)

```

Create table phone
(
Telno number(6) primary key,
Cname varchar2(20),
City varchar2(10),
Pr_read number(5),
Cur_read number(5),
Net_units number(5),
Tot_amt number(8,2)
);

```

```

SQL>insert into phone(telno,cname,city,pr_read,cur_read)
values('&telno','&cname','&city',&pr_read,&net_units);

```

```

create or replace procedure phonebill
as
nunit phone.net_units%type;
tamt phone.tot_amt%type;
p phone%rowtype;
cursor c is select * from phone for update;
begin
open c;
loop
fetch c into p;
exit when c%notfound;

```

```

nunit: =p.cur_read-p.pr_read;
tamt: =nunit*0.5;
update phone set net_units=nunit where current of c;
update phone set tot_amt=tamt where current of c;
dbms_output.put_line('customer phone number' || p.telno);
dbms_output.put_line('customer name' || p.cname);
dbms_output.put_line('city' || p.city);
dbms_output.put_line('total amount' || tamt);
end loop;
close c;
end;

```

SQL>exec phonebill;

28. Write a procedure to update the salary of employee, who belongs to Department 20 with a 15% percentage of raise

```

create or replace procedure raise_salary
as
begin
update emp set sal=sal+(15/100)*sal where deptno=20;
end;
/

```

29. Write a PL/Sql procedure to prepare an electricity bill by using following table :

name	null?	Type
mno	not null	number(3)
cname		varchar2(20)
cur_read		number(5)
prev_read		number(5)
no_units		number(5)
amount		number(8,2)
ser_tax		number(8,2)
net_amt		number(9,2)

```

create table elect
(mno number(3) primary key,
cname varchar2(20),
cur_read number(5),
prev_read number(5),
no_units number(5),
amount number(8,2),
ser_tax number(8,2),
net_amt number(9,2)
);

```

```

SQL>Insert into elect(mno,cname,cur_read,prev_read)
Values(&mno,'&cname',&cur_read,&prev_read);

```

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```

create or replace procedure powerbill
as
  no_un elect.no_units%type;
  amt elect.amount%type;
  stax elect.ser_tax%type;
  net elect.net_amt%type;
  e elect%rowtype;
  cursor c9 is select * from elect for update;
begin
  open c9;
  loop
  fetch c9 into e;
  exit when c9%notfound;
  no_un:=e.cur_read-e.prev_read;
  amt:=no_un*1.5;
  stax:=(5/100)*amt;
  net:=amt+stax;
  update elect set no_units=no_un,amount=amt,
    ser_tax=stax,net_amt=net where current of c9;
  dbms_output.put_line('customer meter number'||e.mno);
  dbms_output.put_line('customer name'||e.cname);
  dbms_output.put_line('total amount is '||net);
  end loop;
  close c9;
end;

```

30. Write a PL/Sql program to retrieve data from emp table using cursors.

```

declare
  cursor c1 is select * from emp;
  e emp%rowtype;
begin
  open c1;
  loop
  fetch c1 into e;
  exit when c1%notfound;
  dbms_output.put_line('emp ::'||c1%rowcount||' employee');
  dbms_output.put_line('employee no:'||e.empno);
  dbms_output.put_line('employee name'||e.ename);
  dbms_output.put_line('employee job is '||e.job);
  dbms_output.put_line('employee salary is '||e.sal);
  dbms_output.put_line('*-*-*-*-*-*-*-*-*-*-*');
  end loop;
end;

```