

PL* SQL

Exercise 8

1. Write a stored procedure by the name of Comp_intr to calculate the amount of interest on a bank account that compounds interest yearly. The formula is:-

$$I = p (1 + r)^y - p$$

where:-

I is the total interest earned.

p is the principal.

r is the rate of interest as a decimal less than 1, and

y is the number of years the money is earning interest.

Your stored procedure should accept the values of p , r and y as parameters and insert the Interest and Total amount into temp table.

```
create or replace procedure comp_intr(p number,r number,y number)
```

```
as
```

```
v_i number(10,2);
```

```
v_t number(10,2);
```

```
begin
```

```
v_i:=power(1+r,y);
```

```
v_i:=(p*v_i)-p;
```

```
v_t:=v_i+p;
```

```
insert into temp values(v_i,v_t);
```

```
end;
```

```
begin
```

```
comp_intr(1000,10,1);
```

```
end;
```

2. Create a stored function by the name of Age_calc. Your stored function should accept the date of birth of a person as a parameter. The stored function should

calculate the age of the person in years, months and days e.g. 35 years, 3 months, 17 days. The stored function should return the age in years directly (with the help of Return statement). The months and days are to be returned indirectly in the form of OUT parameters. Write a PL*SQL block to accept the date of birth of an employee from the user, call the stored function, and display the age of the employee on the screen. Display the above results on the screen using dbms_output.put_line.

```
create or replace function age_calc(dob in date,mon out number,day out number)
return number
as
age number(10);
begin
age:=trunc(MONTHS_BETWEEN(SYSDATE,dob)/12);
mon:=MOD(MONTHS_BETWEEN(SYSDATE,dob),12);
day:=mod(sysdate-dob,30);
return age;
end;
```

```
declare
age number(10);
mon number(10);
day number(10);
begin
age:=age_calc('AUG-12-2002',mon,day);
dbms_output.put_line(age||' '||mon||' '||day);
end;
```

3. Create a package by the name of Payroll_calc. The package should contain separate procedures for DA, HRA, Gross, Tax and Net calculation.

Formulae:-

DA = 10% of Sal for Managers and 5% of Sal for others.

HRA = 20% of Sal for employees of department 10 and 7% of Sal for employees of other departments.

Gross = Sal + DA + HRA.

If Gross exceeds 4000, Tax is to be deducted at 5% of the amount exceeding 4000. If Gross exceeds 5000, Tax is to be deducted at 5% of the amount exceeding 4000 and an additional of 2% of the amount exceeding 5000.

Net = Gross – Tax.

Write a PL*SQL block that calls the procedures from the above package. The PL*SQL block should print the Pay slips for all the employees. The format of the Pay slip should be as follows:-

Name:- KING Designation:- PRESIDENT Dept:- ACCOUNTING

Sal:- xxx DA:- xxx HRA:- xxx Gross:- xxx Tax:- xxx Net:- xxx
