QUIZ 2

NAME: _____ **MATRIC NO:** _____

Below is part of a hospital database. The primary keys are highlighted in bold.

Doctor *(**doc_id**, doc_name, datehired, salpermon, area)*
Patient *(**pt_id**, pt_lname, pt_fname, ptdob, doc_id)*
Billing *(**pt_id**, balance, duedate, pt_ins)*

Sample data:

select * from doctor;

DOC_ID	DOC_NAME	DATEHIRED	SALPERMON	AREA
432	Harrison	05-DEC-94	12000	Pediatrics
509	Vester	09-JAN-00	8100	Pediatrics
389	Lewis	21-JAN-96	10000	Pediatrics
504	Cotner	16-JUN-98	11500	Neurology
235	Smith	22-JUN-98	4550	Family Practice
356	James	01-AUG-98	7950	Neurology

6 rows selected.

select * from patient;

PT_ID	PT_LNAME	PT_FNAME	PTDOB	DOC_ID
168	James	Paul	14-MAR-97	432
331	Anderson	Brian	06-MAR-48	235
313	James	Scott	01-MAR-33	235
816	Smith	Jason	12-DEC-99	509
314	Porter	Susan	14-NOV-67	235
315	Saillez	Debbie	09-SEP-55	235
719	Rogers	Anthony	07-DEC-41	504
264	Walters	Stephanie	01-JAN-45	504
267	Westra	Lynn	12-JUL-57	235
103	Poole	Jennifer	13-MAY-02	389
108	Baily	Ryan	25-DEC-77	235
943	Crow	Lewis	16-OCT-49	235
847	Cochran	John	03-MAR-48	356
163	Roach	Becky	08-SEP-75	235
504	Jackson	John	14-OCT-43	235
703	Davis	Linda	17-JUL-02	509
307	Jones	J.C.	17-JUL-02	509
439	Wright	Chasity	23-APR-73	235
696	Vanderchuck	Keith	08-AUG-68	504
966	Mcginnis	Allen	03-MAY-59	504
669	Sakic	Joe	16-SEP-76	504

21 rows selected.

select * from billing;

PT_ID	BALANCE	DUEDATE	PT_INS
168	15650	21-AUG-01	SIH
331	300	09-SEP-01	BCBS
314	100	31-MAR-01	BCBS
264	35000	11-JAN-01	MediSupplA
103	4500	01-JUL-01	HealthCare
847	98000	31-JAN-00	BCBS
703	225	31-AUG-01	HealthCare
696	79850	15-JUL-01	BCBS
966	98700	15-JUL-01	BCBS
307	450	31-AUG-01	HealthCare
439	500	31-AUG-01	QualityCare
315	1500	14-SEP-01	HealthCare
669	128450	15-JUL-01	BCBS

13 rows selected.

1. Write a PL/SQL script to create a **FUNCTION** that gives discount for patients. Give 20% discount to Dr. Smith's patients, 15% discount to Dr. Cotner's patients, and 5% discount to Dr. Vester's patients. (5 pts)

SOLUTION

```
create or replace function discount(docname varchar2) return number is

  disc number;

begin
  if docname = 'Smith' then
    disc  := 0.20;
  elsif docname = 'Cotner' then
    disc  := 0.15;
  elsif docname = 'Vester' then
    disc  := 0.05;
  else
    disc := 0;
  end if;

  return disc;
end;
```

2. Call the function from a **PROCEDURE**. Name the procedure ***giveDisc***. Allow the user to pass a parameter patient ID (pt_id). Calculate and display the new balance for the patient. (10 pts)

Assume the procedure created has no errors and will be called from the following Anonymous Block:

```
begin
   giveDisc (331);
end;
```

Expected output:
Patient Brian Anderson under Dr. Smith gets 20% discount.
His/her new billing balance is RM 240
PL/SQL procedure successfully completed.

Or

```
begin
   giveDisc (307);
end;
```

Expected output:
Patient J.C. Jones under Dr. Vester gets 5% discount.
His/her new billing balance is RM 427.5
PL/SQL procedure successfully completed.

Or

```
begin
   giveDisc (264);
end;
```

Expected output:
Patient Stephanie Walters under Dr. Cotner gets 15% discount.
His/her new billing balance is RM 29750
PL/SQL procedure successfully completed.

SOLUTION

```
create or replace procedure giveDisc(ptid number) is
   v_patname varchar2(50);
   v_docname varchar2(50);
   v_bal number;
   v_disc number;
begin
   select pt_fname||' '||pt_lname, doc_name, balance
   into v_patname, v_docname, v_bal
   from doctor join patient
   on doctor.doc_id = patient.doc_id
   join billing
   on patient.pt_id = billing.pt_id
   where patient.pt_id = ptid;

   v_disc := v_bal – (discount(v_docname) * v_bal);
   dbms_output.put_line('Patient '||v_patname||' under Dr. '||v_docname||' gets '||
    discount(v_docname) * 100||'% discount. ');
    dbms_output.put_line ('His/her new billing balance is RM '||v_disc);
end;
```