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STUDENT CODE:

STUDENT NAME:

PLSQL MIDTERM EXAM-MONDAY GROUP

DATE: 08/05/2022

DURATION: 3 HOURS

INSTRUCTIONS

THIS EXAM HAS 5 MANDATORY SECTIONS

- Use one statement to respond to all the questions in SECTION A
- Use one statement to respond to all the questions in SECTION B
- Use one statement to explain the output of each and every program written in SECTION C and then write the program output in the provided output box.
- Do any two programs of your choice from SECTION D
- Respond to the question in SECTION E. **Make sure that all the possible exceptions are well handled**
- Use the provided boxes to write your answers
- No additional answer sheet will be used or provided
- The whole exam is out of **80 MARKS**

SECTION A /10 MARKS

1) How do you declare a user-defined exception?

2) What is the use of this function EXCEPTION_INIT()?

3) How do you declare a %type data type? (Syntax)

4) What is a Sequential Control structure?

5) When is this error: NO_DATA_FOUND raised?

6) When is this error: ZERO_DIVIDE raised?

7) What is the use of a SELECTOR in a simple case statement?

8) How do you raise a custom error number within a PLSQL program?

9) What happens when two EXCEPTION_INIT pragmas assign different error codes to the same user-defined exception?

10) What happens to a program if you don't specify an ELSE clause, and none of the results in the WHEN clauses match the result of the CASE?

SECTION B /10 MARKS

Respond by TRUE or FALSE and explain your answer in one statement

1) The IF THEN END IF control structure is an either/or construct.

2) Is there any syntax error in this IF statement? IF salary > 200 THEN salary := salary + 200; END IF;

3) CASE statement cannot be nested in PL/SQL.

4) CASE statements allow programmers to execute the same codes repeatedly.

5) Global variables cannot be accessed inside a nested IF block.

SECTION C /20 MARKS

What is the output of these programs?

1) First Program

```
DECLARE
   X NUMBER: =5;
   Y NUMBER;
BEGIN
Y: =
CASE X
WHEN 2 THEN 'Small value'
WHEN 3 THEN 'Mid value'
WHEN 5 THEN 'Large value'
ELSE NULL
END;
dbms_output.put_line(Y);
END;
```

2) Second Program

```
DECLARE
  v_num NUMBER:=3;
BEGIN
  FOR i IN 1..v_num LOOP
```

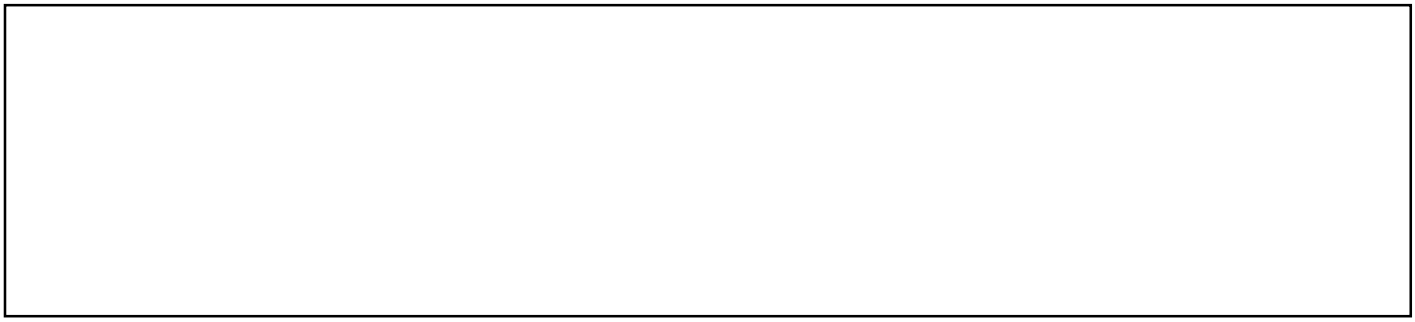
```
    v_num:=v_num+1;
    DBMS_OUTPUT.put_line(v_num);
  END LOOP;
END;
```

3) Third Program

```
DECLARE
   X  NUMBER: =5;
   Y  NUMBER: =23;
BEGIN
   IF (X>Y) THEN dbms_output.put_line('X is greater than Y');
   END IF;
END;
```

4) Fourth Program

```
DECLARE
        v_num number: =1;
BEGIN
        while (v_num <= 10) LOOP
                dbms_output.put_line(''||v_num);
                v_num := v_num+2;
        END LOOP;
END;
```



5) Fifth Program

```
DECLARE
  v_num NUMBER:=0;
BEGIN
  LOOP
    v_num:=v_num+1;
    DBMS_OUTPUT.put_line(v_num);
    IF v_num = 5 THEN
      EXIT;
    END IF;
  END LOOP;
END;
```

SECTION D /20 MARKS

Answer any two questions of your choice

1) Write a PL/SQL program to check whether a given character is letter or number

2) Write a PL/SQL Program to check the greatest input among 3 numbers.

3) Write a PL/SQL Program to swap two numbers

SECTION E /20 MARKS

Write a program that updates the salary of employee whose salary is lower or equal to $2500 and has an emp_code higher than or equal to 10. The salary should be updated with 10% of the employee's actual salary and the new salary should be updated in the database. After update, the program should insert the emp_code, the first_name, the last_name and the 10% of the salary into a table called temp_emp_table to record the changes made on the employee' salary. The column of the temp_emp_table table are as follow:

E_CODE	E_FIRSTNAME	E_LASTNAME	SALARY_PERCENTAGE