



Adventist University of Central Africa

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STUDENT CODE:

STUDENT NAME:

PLSQL MIDTERM EXAM-THURSDAY GROUP

DATE: 28/04/2022

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

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

4) What is the command used to get the server output result and display it into the screen (command line)?

5) When is this error: ROWTYPE_MISMATCH raised?

6) When is this error: CASE_NOT_FOUND 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?



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9) What is the importance of using the Keyword CONSTANT during a variable declaration?

10) What is Forward referencing?

SECTION B /10 MARKS

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

1) The BEGIN keyword starts the variable declaration sections of a PL/SQL block.

2) Is there any syntax error in this assignments statement? `e_salary = e_salary + 2000;`



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3) PL/SQL does not have data types or variables.

4) Is this DECLARATION correct?

DECLARE

a NUMBER: =1;

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

a number (2);

BEGIN

FOR a IN REVERSE 10 .. 20 LOOP

dbms_output.put_line(a);

END LOOP;

END;

2) Second Program

DECLARE

a number (3): = 100;

b number (3): = 200;

BEGIN

IF (a = 100) THEN

IF (b <> 200) THEN

dbms_output.put_line(b);

END IF;

END IF;

dbms_output.put_line(a);



END;

3) Third Program

DECLARE

a number (2): = 21;

b number (2): = 10;

BEGIN

IF (a <= b) THEN

dbms_output.put_line(a);

END IF;

IF (b >= a) THEN

dbms_output.put_line(a);

END IF;

IF (a <> b) THEN

dbms_output.put_line(b);

END IF;

END;



4) Fourth Program

DECLARE

x NUMBER;

BEGIN

x: = 5;

x: = 10;

dbms_output.put_line(-x);

dbms_output.put_line(+x);

x: = -10;

dbms_output.put_line(-x);

dbms_output.put_line(+x);

END;



5) Fifth Program

DECLARE

i number;

BEGIN

i: = 0;

LOOP

i: = i+2;

dbms_output.put_line(i);

exit WHEN i > 10;



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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 digit



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- 2) Write a PL/SQL program to check whether a given number is positive, negative or zero.



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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
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