## Tema 1 – PL/SQL

1. Underline the programming language meeting the criteria:

## Criteria

3GL	PL/SQL	SQL
4GL	PL/SQL	SQL
Is proprietary to Oracle Corporation	PL/SQL	SQL
Nonprocedural	PL/SQL	SQL
Procedural	PL/SQL	SQL
Is ANSI-compliant	PL/SQL	SQL

2. In your own words, describe why a procedural language like PL/SQL is needed.

3. Complete the following chart defining the syntactical requirements for a PL/SQL block:

	Optional or Mandatory?	What is included in this section?
DECLARE		
BEGIN		
EXCEPTION		
END;		

- 4. Which of the following PL/SQL blocks execute successfully? For the blocks that fail, explain why they fail:
- A. BEGIN END;
- B. DECLARE amount INTEGER(10); END;
- C. DECLARE BEGIN END;
- D. DECLARE amount NUMBER(10);
  BEGIN DBMS\_OUTPUT.PUT\_LINE(amount);
  END;
- 5. In Application Express:
- A. Create and execute a simple anonymous block that outputs your name.
- B. Create and execute a simple anonymous block that does the following: Declares a variable of datatype DATE and populates it with the date that is six months from today.

Outputs "In six months, the date will be: <insert date>."

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6. Write a SQL statement that will return data that looks like this:

COUNTRY	NATIONAL HOLIDAY
United Arab Emirates	Independence Day is 2-Dec
Republic of Azerbaijan	Founding of the Democratic Republic of Azerbaijan is 28-May
Republic of Armenia	Independence Day is 21-Sep
Commonwealth of Australia	Australia Day is 26-Jan
Republic of Austria	National Day is 26-Oct
Antarctica	is
Republic of Botswana	Independence Day is 30-Sep
Kingdom of Belgium	is 21-Jul
Peoples Republic of Bangladesh	Independence Day is 26-Mar
Republic of Bulgaria	Liberation Day is 3-Mar
Canada	Canada Day is 1-Jul
Republic of Chad	Independence Day is 11-Aug
Peoples Republic of China	Anniversary of the Founding of the Peoples Republic of China is 1-Oct
Republic of Chile	Independence Day is 18-Sep
Territory of Cocos (Keeling) Islands	Australia Day is 26-Jan
Republic of Colombia	Independence Day is 20-Jul
Republic of Cuba	Independence Day is 20-May
Paracel Islands	is
Spratly Islands	is
Republic of Poland	Constitution Day is 3-May

- 7. Due to a successful global health program, the life expectancy at birth will increase by 7 years for countries whose median ages are below 20. Display the current and increased life expectancy for these countries in the countries table. Name the calculated column "Improved Expectancy."
- 8. Write a SQL statement that lists the country names in alphabetical order. Display the results in uppercase and give the column a heading of "NAME".
- 9. Display all the languages in the languages table that start with "f." Use the lowercase "f" in your SQL statement.
- 10. From the world\_regions table, display the ID, name, and an abbreviation that is the first three characters of the region name.
- 11. Modify your SQL statement so that the abbreviation is the first three characters of the region name followed by the length of the region name. For example: Western Asia would be Wes12.

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- 12. Display all country names from the countries table, along with the life expectancy, rounded to the nearest whole number.
- 13. Write a SQL statement to list country names and capitals. If the capital is null, display it as "none listed."