Using Variables in PL/SQL

Terminology

Directions: Identify the vocabulary word for each definition below:

1. _____ Used for storage of data and manipulation of stored values.
2. _____ values passed to a program by a user or by another program to customize the program.

Try It/Solve It

1. Fill in the blanks.

   A. Variables can be assigned to the output of a _____.

   B. Variables can be assigned values in the _____ section of a PL/SQL block.

   C. Variables can be passed as _____ to subprograms.

2. Identify valid and invalid variable declaration and initialization:

   ```
   number_of_copies       PLS_INTEGER;
   printer_name           CONSTANT VARCHAR2(10);
   deliver_to             VARCHAR2(10):=Johnson;
   by_when                DATE:= SYSDATE+1;
   ```

3. Examine the following anonymous block and choose the appropriate statement.

   ```
   DECLARE
     fname VARCHAR2(20);
     lname VARCHAR2(15) DEFAULT 'fernandez';
   BEGIN
     DBMS_OUTPUT.PUT_LINE( FNAME ||' ' ||lname);
   END;
   ```

   A. The block will execute successfully and print ' fernandez'.
   B. The block will give an error because the fname variable is used without initializing.
   C. The block will execute successfully and print 'null fernandez'.
   D. The block will give an error because you cannot use the DEFAULT keyword to initialize a variable of the VARCHAR2 type.
   E. The block will give an error because the FNAME variable is not declared.

4. In Application Express:

    A. Create the following function:

```
CREATE FUNCTION num_characters (p_string IN VARCHAR2)
RETURN INTEGER AS
  v_num_characters INTEGER;
BEGIN
  SELECT LENGTH(p_string) INTO v_num_characters
    FROM dual;
  RETURN v_num_characters;
END;
```

    B. Create and execute the following anonymous block:

```
DECLARE
  v_length_of_string INTEGER;
BEGIN
  v_length_of_string := num_characters('Oracle Corporation');
  DBMS_OUTPUT.PUT_LINE(v_length_of_string);
END;
```

5. Write an anonymous block that uses a country name as input and prints the highest and
    lowest elevations for that country. Use the wf_countries table. Execute your block three
    times using United States of America, French Republic, and Japan.