Database Programming with PL/SQL
Semester 2 Mid Term Review

Name: _____

1. What may be included in packages (circle answers)?

   a. Procedures
   b. Cursors
   c. Variables
   d. Exceptions

2. The two parts of a package are stored as separate objects in the database. (True or False)

3. In which component of a package is the full executable code of a procedure written?

   _____

4. The two parts of a package are stored as separate objects in the database. (True or False)

5. Identifiers defined in the package body are private and not visible outside the package body. (True or False)

6. Which statement is executed to invoke the chk_hiredate function on 'Smith'?

   a. check_emp_pkg (chk_hiredate ('Smith');
   b. check_emp_pkg.chk_hiredate('Smith');
   c. check_emp_pkg on chk_hiredate ('Smith');

7. Package EMP_PKG contains two procedures, DEL_EMP and SHOW_EMP. How do you determine the parameters for these procedures? _____

   a. DESCRIBE del_emp AND show_emp
   b. DESCRIBE emp_pkg (del_emp, show_emp)
   c. DESCRIBE emp_pkg

8. A cursor declared in the package specification can be referenced by a private procedure defined in the package body. (True or False)

9. The scope of a public subprogram includes the whole of the package and the calling environment. (True or False)

10. A variable declared in the package body is private, and can be referenced within the package or in the calling environment. (True or False)

11. The package body of SALES_PKG also includes a function called NEW_TAX. Which of the following statements are true? _____

> CREATE OR REPLACE PACKAGE sales_pkg IS
>   percent_tax   NUMBER := 20;
>   PROCEDURE raise_tax;
> END sales_pkg;

   a. RAISE_TAX can be executed in the calling environment by executing SALES_TAX.RAISE_TAX
   b. NEW_TAX can be executed from outside the package by calling SALES_TAX.NEW_TAX.
   c. RAISE_TAX is a public procedure and NEW_TAX is a private function.
   d. PERCENT_TAX can be changed by using SALES_TAX (PERCENT_TAX) := 20;

12. Which statement will remove the specification and body of the SALES_PKG package? _____

   a. DELETE sales_pkg;
   b. DROP PACKAGE sales_pkg;
   c. DROP PACKAGE SPECIFICATION sales_pkg;
   d. DROP PACKAGE BODY sales_pkg;

13. Which data dictionary view contains the code for all packages that you can execute? _____

14. The _____ feature in PL/SQL enables you to develop two or more packaged subprograms with the same name.

15. Is the following package specification allowable? (Yes or No)

> CREATE OR REPLACE PACKAGE emp_pkg IS
>   PROCEDURE find_emp
>   (p_employee_id IN NUMBER, p_last_name OUT VARCHAR2);
>   PROCEDURE find_emp
>   (p_job_id IN VARCHAR2, p_last_name OUT VARCHAR2);
>   PROCEDURE find_emp
>   (p_hiredate IN DATE, p_last_name OUT VARCHAR2); END emp_pkg;

16. Is the following package specification allowable? (Yes or No)

> CREATE OR REPLACE PACKAGE emp_pkg IS
>   FUNCTION get_emp
>   (p_employee_id IN NUMBER) RETURN VARCHAR2;
>   FUNCTION get_emp
>   (p_employee_id IN NUMBER) RETURN DATE; END emp_pkg;

17. Which statements would execute successfully using the EMP_PKG? _____

     CREATE PACKAGE emp_pkg IS
      PROCEDURE name_proc (p_char IN CHAR) IS ...; PROCEDURE
     name_proc (p_varchar IN VARCHAR2)IS ...; END emp_pkg;

    a. v_date := emp_pkg.name_proc ('Smith');
    b. emp_pkg (name_proc ('Smith');
    c. emp_pkg.name_proc (p_char=> 'Smith');

18. The TO_CHAR and UPPER functions belong to the_____PL/SQL package.

19. The example code below shows a referencing problem, which can be taken care of by using
    _____.

     CREATE OR REPLACE PACKAGE BODY forward_pkg IS
      PROCEDURE award_bonus(...) IS BEGIN
       calc_rating(...); END;
      PROCEDURE calc_rating(...) IS BEGIN
       ... END;
     END forward_pkg;

20. Which of the following best describes a package initialization block? _____

    a. It is an anonymous block in the package specification to initialize public and private variables.
    b. It is an anonymous block at the end of a package body that executes automatically the first time each user session invokes a subprogram in the package.
    c. It is a named procedure in a package that must be invoked by a user before any other part of the package can be invoked.
    d. It is a private function within the package body.

21. Package functions can be used in SQL statements. (True or False)

22. A function called from a query or DML statement may end the current transaction. (True or False)

23. The package state is (circle answers):

    a. Initialized each time the package is called.
    b. Initialized only the first time the package is loaded.
    c. Persistent for the life of the session but may be changed when public variables are modified.
    d. Persistent for all active sessions, including your own.

24. A cursor's state in a package depends in part on whether the cursor is open or closed. (True or False)

25. The DBMS_OUTPUT Oracle-supplied package is commonly used for_____purposes.

26. What will be displayed when the following code is executed? _____

```
BEGIN
  DBMS_OUTPUT.PUT_LINE('Retu is brave'); DBMS_OUTPUT.PUT('and
  wants to'); DBMS_OUTPUT.PUT('be a firefighter.');
  DBMS_OUTPUT.NEW_LINE;
END;
```

a. Retu is brave and wants to be a firefighter.
b. Retu is brave
   and wants to be a firefighter.
c. Retu is brave
   and wants tobe a firefighter.
d. Retu is brave and wants to
   be a firefighter.

27. What is the main purpose of the UTL_FILE package?

   _____

28. The following is a valid statement using the UTL_FILE package. (True or False)

   v_file_handle := UTL_FILE.FOPEN ('MYDIR','myfile.txt');

29. What are the stages that a SQL statement may undertake (circle answers)?

a. Parse
b. Create
c. Execute
d. Compile
e. Fetch

30. At what stage in the execution of a SQL statement is the syntax checked, the existence of an object is verified, and privileges are validated? _____

31. The dynamic SQL enables what types of statements to be executed in PL/SQL?

   _____

32. What phrase goes in Line A to remove a table?

   _____

   CREATE PROCEDURE drop_any_table(p_table_name VARCHAR2) IS BEGIN
     -- Line A -- END;

33. What is the name of the package that can also be used to write Dynamic SQL?

   _____