



Exam : 1Z0-147

Title : Oracle 9i: Program with PL/SQL

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QUESTION 1:

Examine this function:

```
CREATE OR REPLACE FUNCTION CALC_PLAYER_AVG
(V_ID IN PLAYER_BAT_STAT.PLAYER_ID%TYPE)
RETURN NUMBER
IS
V_AVG NUMBER;
BEGIN
SELECT HITS / AT_BATS
INTO V_AVG
FROM PLAYER_BAT_STAT
WHERE PLAYER_ID = V_ID;
RETURN (V_AVG);
END;
```

Which statement will successfully invoke this function in SQL *Plus?

- A. SELECT CALC_PLAYER_AVG(PLAYER_ID)
FROM PLAYER_BAT_STAT;
- B. EXECUTE CALC_PLAYER_AVG(31);
- C. CALC_PLAYER('RUTH');
- D. CALC_PLAYER_AVG(31);
- E. START CALC_PLAYER_AVG(31)

Answer: A

Explanation:

A function can be invoked in SELECT Statement provided that the function does not modify any database tables. The function must use positional notation to pass values to the formal parameters. The formal parameters must be of the IN mode. They should return data types acceptable to SQL and they should not include any transaction, session, or system control statements.

Incorrect Answers

B. You can't call a function in this way, in this way you can call a procedure, because function must return a value, to call a function using EXECUTE command you should declare a bind variable using the VARIABLE command then assign the value returned from the function to this variable, in the following way:

```
SQL> VARIABLE v_get_value NUMBER
SQL> EXECUTE :v_get_value := CALC_PLAYER_AVG(31)
PL/SQL procedure successfully completed.
SQL> PRINT v_get_value
V_GET_VALUE
-----
```

C. Again this way can't be use for calling a function in PL/SQL block because the function return a value and this values must be assigned to PL/SQL variable or to bind variable. Like this

```
DECLARE
v_get_from_fn NUMBER;
BEGIN
v_get_from := CALC_PLAYER_AVG(31);
END;
/
```

D. Same as C.

E. START is use to execute a script.

QUESTION 2:

Which three are true statements about dependent objects? (Choose three)

- A. Invalid objects cannot be described.
- B. An object with status of invalid cannot be a referenced object.
- C. The Oracle server automatically records dependencies among objects.
- D. All schema objects have a status that is recorded in the data dictionary.
- E. You can view whether an object is valid or invalid in the USER_STATUS data dictionary view.
- F. You can view whether an object is valid or invalid in the USER_OBJECTS data dictionary view.

Answer: A,C,F

Incorrect answers: B, D, E

QUESTION 3:

You have created a stored procedure DELETE_TEMP_TABLE that uses dynamic SQL to remove a table in your schema. You have granted the EXECUTE privilege to user A on this procedure.

When user A executes the DELETE_TEMP_TABLE procedure, under whose privileges are the operations performed by default?

- A. SYS privileges
- B. Your privileges
- C. Public privileges
- D. User A's privileges
- E. User A cannot execute your procedure that has dynamic SQL.

Answer: B

When you create a procedure, it will be executed under the privileges of the creator,

unless the procedure has the following statement AUTHID CURRENT_USER. If you specify AUTHID CURRENT_USER, the privileges of the current user are checked at run time, and external references are resolved in the schema of the current user. Like this example

```
SQL> CREATE OR REPLACE PROCEDURE delete_temp_table(v_table
varchar2)
2 AUTHID CURRENT_USER
3 IS
4 BEGIN
5 EXECUTE IMMEDIATE 'DROP TABLE '||V_TABLE;
6 END;
7 /
```

Procedure created.

If the procedure is create in this way then the EXECUTE IMMEDIATE statement will be execute under the privilege of the user who executes the procedure, but if we skip line 2 then the procedure will be executed under the privilege of the owner of the procedure.

Incorrect Answers

A: SYS privilege has nothing with is.

C: What is the public privileges? There is nothing called public privileges.

D: This will be true if the procedure contains the AUTHID CURRENT_USER.

E: There is no problem in having a dynamic SQL statement in Procedure.

QUESTION 4:

Examine this code:

```
CREATE OR REPLACE PRODECURE add_dept
(p_dept_name VARCHAR2 DEFAULT 'placeholder',
p_location VARCHAR2 DEFAULT 'Boston')
IS
BEGIN
INSERT INTO departments
VALUES (dept_id_seq.NEXTVAL, p_dept_name, p_location);
END add_dept;
/
```

Which three are valid calls to the add_dep procedure? (Choose three)

- A. add_dept;
- B. add_dept('Accounting');
- C. add_dept(, 'New York');
- D. add_dept(p_location=>'New York');

Answer: A,B,D

A is correct because both of the parameter have a default values.

B is correct because here we call the procedure using position notation, and the first parameter for the procedure will have the value 'Accounting', and since the second

parameter has a default value then we can skip it, and in this case it will take the default value.

D is correct because here we are calling the procedure using naming notation, the value 'New York' will go to the parameter p_location, and the parameter p_dept_name will have the default value.

The following table list the for passing parameters to a procedure:

Incorrect Answer

C: You can't use this way and assume that the PL/SQL will understand that he should assign the default value for the first parameter. This is incorrect way for calling.

QUESTION 5:

Which two statements about packages are true? (Choose two)

- A. Packages can be nested.
- B. You can pass parameters to packages.
- C. A package is loaded into memory each time it is invoked.
- D. The contents of packages can be shared by many applications.
- E. You can achieve information hiding by making package constructs private.

Answer: D,E

Actually these are some of the advantages of the package, sharing the package among applications and hide the logic of the procedures and function that are inside the package by declaring them in the package header and write the code of these procedures and functions inside the package body.

Incorrect Answers:

- A: Packages can not be nested
 - B: Parameters can't be passed to a package; parameters can be passed to procedures and functions only.
 - C: By the first time you call a procedure, function, or reference a global variable within the package, the whole package will be loaded into the memory and stay there, so when ever you need to reference any of the package's constructs again you will find it in the memory.
-

QUESTION 6:

Which two programming constructs can be grouped within a package? (Choose two)

- A. Cursor
- B. Constant
- C. Trigger
- D. Sequence
- E. View

Answer: A,B

Explanation:

The constructs that can be grouped within a package include:

Procedures and Functions

Cursors, Variables and Constants

Composite data types, such as TABLE or RECORD

Exceptions

Comments

PRAGMAs

Incorrect Answers

C: Triggers are objects that we create are created on the tables.

D: Sequences can't be grouped inside the packages, but we can reference them inside the package.

E: Views are created and they are database objects, and they can't be grouped inside the packages.

QUESTION 7:

Which two statements describe the state of a package variable after executing the package in which it is declared? (Choose two)

- A. It persists across transactions within a session.
- B. It persists from session to session for the same user.
- C. It does not persist across transaction within a session.
- D. It persists from user to user when the package is invoked.
- E. It does not persist from session to session for the same user.

Answer: A,E

You can keep track of the state of a package variable or cursor, which persists throughout the user session, from the time the user first references the variable or cursor to the time the user disconnects.

1. Initialize the variable within its declaration or within an automatic, one-time-only procedure.
2. Change the value of the variable by means of package procedures.
3. The value of the variable is released when the user disconnects.

Incorrect Answers

B: Each session will have its own value for the variables

C: It persists across the transactions and through the user session.

D: Each user has his own values and results, because each user has his own users.

QUESTION 8:

Which code can you use to ensure that the salary is not increased by more than 10% at a time nor is it ever decreased?

- A. ALTER TABLE emp ADD
CONSTRAINT ck_sal CHECK (sal BETWEEN sal AND sal*1.1);
- B. CREATE OR REPLACE TRIGGER check_sal
BEFORE UPDATE OF sal ON emp
FOR EACH ROW
WHEN (new.sal < old.sal OR
new.sal > old.sal * 1.1)
BEGIN
RAISE_APPLICATION_ERROR (- 20508, 'Do not decrease
salary not increase by more than 10%');
END;
- C. CREATE OR REPLACE TRIGGER check_sal
BEFORE UPDATE OF sal ON emp
WHEN (new.sal < old.sal OR
new.sal > old.sal * 1.1)
BEGIN
RAISE_APPLICATION_ERROR (- 20508, 'Do not decrease
salary not increase by more than 10%');
END;
- D. CREATE OR REPLACE TRIGGER check_sal
AFTER UPDATE OR sal ON emp
WHEN (new.sal < old.sal OR
-new.sal > old.sal * 1.1)
BEGIN
RAISE_APPLICATION_ERROR (- 20508, 'Do not decrease
salary not increase by more than 10%');
END;

Answer: B

Row triggers are the correct chose for solving the problem. A row trigger fires each time the table is affected by the triggering event. If the triggering event affects no rows, a row trigger is not executed.

Row triggers are useful if the trigger action depends on data of rows that are affected or on data provided by the triggering event itself. You can create a BEFORE row trigger in order to prevent the triggering operation from succeeding if a certain condition is violated.

Within a ROW trigger, reference the value of a column before and after the data change by prefixing it with the OLD and NEW qualifier.

Incorrect Answers:

A: Check constaint can't do this job lets take a look:

```
SQL> ALTER TABLE emp ADD  
2 CONSTRAINT ck_sal CHECK (sal BETWEEN sal AND sal*1.1)
```

3 /

Table altered.

```
SQL> select ename, sal  
2 from emp  
3 where ename = 'Bill';  
ENAME SAL  
-----
```

Bill 5000

Now let's issue an update statement

```
SQL> update emp  
2 set sal = 10  
3 where ename = 'Bill';  
1 row updated.
```

As you can see the check constraint can't compare the old value with the new value.

D,C: You can use NEW and OLD qualifier with row level triggers, If in the CREATE TRIGGER statement you didn't say FOR EACH ROW then the trigger will be statement level trigger

QUESTION 9:

Examine this code:

```
CREATE OR REPLACE PACKAGE bonus  
IS  
g_max_bonus NUMBER := .99;  
FUNCTION calc_bonus (p_emp_id NUMBER)  
RETURN NUMBER;  
FUNCTION calc_salary (p_emp_id NUMBER)  
RETURN NUMBER;  
END;  
/  
CREATE OR REPLACE PACKAGE BODY bonus  
IS  
v_salary employees.salary%TYPE;  
v_bonus employees.commission_pct%TYPE;  
FUNCTION calc_bonus (p_emp_id NUMBER)  
RETURN NUMBER  
IS  
BEGIN  
SELECT salary, commission_pct  
INTO v_salary, v_bonus  
FROM employees  
WHERE employee_id = p_emp_id;  
RETURN v_bonus * v_salary;  
END calc_bonus  
FUNCTION calc_salary (p_emp_id NUMBER)  
RETURN NUMBER
```



```
IS
BEGIN
SELECT salary, commission_pct
INTO v_salary, v_bonus
FROM employees
WHERE employees
RETURN v_bonus * v_salary + v_salary;
END cacl_salary;
END bonus;
/
```

Which statement is true?

- A. You can call the BONUS.CALC_SALARY packaged function from an INSERT command against the EMPLOYEES table.
- B. You can call the BONUS.CALC_SALARY packaged function from a SELECT command against the EMPLOYEES table.
- C. You can call the BONUS.CALC_SALARY packaged function form a DELETE command against the EMPLOYEES table.
- D. You can call the BONUS.CALC_SALARY packaged function from an UPDATE command against the EMPLOYEES table.

Answer: B

For the Oracle server to execute a SQL statement that calls a stored function, it must know the purity level of a stored functions, that is, whether the functions are free of side effects. Side effects are changes to database tables or public packaged variables (those declared in a package specification). Side effects could delay the execution of a query, yield order-dependent (therefore indeterminate) results, or require that the package state variables be maintained across user sessions. Various side effects are not allowed when a function is called from a SQL query or DML statement. Therefore, the following restrictions apply to stored functions called from SQL expressions:

- A function called from a query or DML statement may not end the current transaction, create or roll back to a savepoint, or alter the system or session
- A function called from a query statement or from a parallelized DML statement may not execute a DML statement or otherwise modify the database
- A function called from a DML statement may not read or modify the particular table being modified by that DML statement

QUESTION 10:

Which statement is valid when removing procedures?

- A. Use a drop procedure statement to drop a standalone procedure.
- B. Use a drop procedure statement to drop a procedure that is part of a package. Then recompile the package specification.
- C. Use a drop procedure statement to drop a procedure that is part of a package.

Then recompile the package body.

D. For faster removal and re-creation, do not use a drop procedure statement.

Instead, recompile the procedure using the alter procedure statement with the REUSE SETTINGS clause.

Answer: A

The DROP PROCEDURE statement is used to drop a stand alone procedure

Incorrect Answers:

B: You can't drop a procedure that's inside a package, you have to drop the package, and in this case the whole procedures, functions,... that are inside the packages will be dropped.

C: Same as B.

D: REUSE SETTINGS is used to to prevent Oracle from dropping and reacquiring compiler switch settings. With this clause, Oracle preserves the existing settings and uses them for the recompilation.

QUESTION 11:

Examine this package:

```
CREATE OR REPLACE PACKAGE BB_PACK
IS
  V_MAX_TEAM_SALARY NUMBER(12,2);
  PROCEDURE ADD_PLAYER(V_ID IN NUMBER, V_LAST_NAME VARCHAR2,
  NUMBER);
END BB_PACK;
/
CREATE OR REPLACE PACKAGE BODY BB_PACK
IS
  PROCEDURE UPD_PLAYER_STAT
  (V_ID IN NUMBER, V_AB IN NUMBER DEFAULT 4, V_HITS IN
  NUMBER)
  IS
  BEGIN
  UPDATE PLAYER_BAT_STAT
  SET AT_BATS = AT_BATS + V_AB,
  HITS = HITS + V_HITS
  WHERE PLAYER_ID = V_ID;
  COMMIT;
  END UPD_PLAYER_STAT;
  PROCEDURE ADD_PLAYER
  (V_ID IN NUMBER, V_LAST_NAME VARCHAR2, V_SALARY NUMBER)
  IS
  BEGIN
  INSERT INTO PLAYER(ID, LAST_NAME, SALARY)
  VALUES (V_ID, V_LAST_NAME, V_SALARY);
```

```
UPD_PLAYER_STAT(V_ID,0,0);  
END ADD_PLAYER;  
END BB_PACK;
```

You make a change to the body of the BB_PACK package. The BB_PACK body is recompiled.

What happens if the stand alone procedure VALIDATE_PLAYER_STAT references this package?

- A. VALIDATE_PLAYER_STAT cannot recompile and must be recreated.
- B. VALIDATE_PLAYER_STAT is not invalidated.
- C. VALIDATE_PLAYER_STAT is invalidated.
- D. VALIDATE_PLAYER_STAT and BB_PACK are invalidated.

Answer: B

You can greatly simplify dependency management with packages when referencing a package procedure or function from a stand-alone procedure or function.

- If the package body changes and the package specification does not change, the stand-alone procedure referencing a package construct remains valid.
- If the package specification changes, the outside procedure referencing a package construct is invalidated, as is the package body.

QUESTION 12:

You need to create a trigger on the EMP table that monitors every row that is changed and places this information into the AUDIT_TABLE.

What type of trigger do you create?

- A. FOR EACH ROW trigger on the EMP table.
- B. Statement-level trigger on the EMP table.
- C. FOR EACH ROW trigger on the AUDIT_TABLE table.
- D. Statement-level trigger on the AUDIT_TABLE table.
- E. FOR EACH ROW statement-level trigger on the EMPtable.

Answer: A

Explanation:

A FOR EACH ROW trigger on the EMP table will fire for each row that is modified in the employee table and will insert a record in the AUDIT_TABLE for each corresponding row modified in the EMP Table. A Statement-level trigger will only fire once and could only be used to insert a single row into the AUTIT_TABLE.

Incorrect Answers

B: Would only insert one row into the AUDIT_TABLE and could not reference the :OLD &: NEW qualifies. Therefore you could not track the changes made to the EMP Columns, you could only log that an update was performed on the table.

- C: The trigger should be based on the UPDATE Event of the EMP Table.
 - D: Incorrect Trigger Type on the wrong table
 - E: Incorrect Trigger Type
-

QUESTION 13:

Which statements are true? (Choose all that apply)

- A. If errors occur during the compilation of a trigger, the trigger is still created.
- B. If errors occur during the compilation of a trigger you can go into SQL *Plus and query the USER_TRIGGERS data dictionary view to see the compilation errors.
- C. If errors occur during the compilation of a trigger you can use the SHOW ERRORS command within iSQL *Plus to see the compilation errors.
- D. If errors occur during the compilation of a trigger you can go into SQL *Plus and query the USER_ERRORS data dictionary view to see compilation errors.

Answer: A, C, D

Explanation:

- A: If there is a compilation error in the CREATE TRIGGER statement, the trigger is still created.
 - C: You may view the compilation errors in SQL*Plus by issuing the SHOW ERRORS command.
 - D: The TEXT column of the USER_ERRORS View contains the compilation errors. The LINE Column stored the LINE number of the error and the POSITION column contains the character POSITION of the LINE identified in the line COLUMN.
-

QUESTION 14:

Which two dictionary views track dependencies? (Choose two)

- A. USER_SOURCE
- B. UTL_DEPTREE
- C. USER_OBJECTS
- D. DEPTREE_TEMPTAB
- E. USER_DEPENDENCIES
- F. DBA_DEPENDENT_OBJECTS

Answer: D, E

Explanation:

- D: DEPTREE_TEMPTAB is a temporary table used to store dependency information returned by the DEPTREE_FILL procedure.

E: USER_DEPENDENCIES is used to display direct dependencies. ALL_DEPENDENCIES and DBA_DEPENDENCIES also store dependency information.

Incorrect answers

A: USER_SOURCE describes the text source of the stored objects owned by the current user

B: UTL_DEPTREE is not a valid data dictionary view.

C: USER_OBJECTS contains basic information about all objects owned by the current user, but does not contain dependency information

F: DBA_DEPENDENT_OBJECTS this is not a valid data dictionary view however there is a DBA_DEPENDENCIES view

QUESTION 15:

Given a function CALCTAX:

```
CREATE OR REPLACE FUNCTION calctax (sal NUMBER) RETURN  
NUMBER  
IS  
BEGIN  
RETURN (sal * 0.05);  
END;
```

If you want to run the above function from the SQL *Plus prompt, which statement is true?

- A. You need to execute the command CALCTAX(1000);.
- B. You need to execute the command EXECUTE FUNCTION calctax;
- C. You need to create a SQL *Plus environment variable X and issue the command :X := CALCTAX(1000);.
- D. You need to create a SQL *Plus environment variable X and issue the command EXECUTE :X := CALCTAX;
- E. You need to create a SQL *Plus environment variable X and issue the command EXECUTE :X := CALCTAX(1000);

Answer: E

When you call a function from SQL*PLUS you need to assign the returned value a bind variable, and you need the EXECUTE command to execute the function.

QUESTION 16:

What happens during the execute phase with dynamic SQL for INSERT, UPDATE, and DELETE operations?

- A. The rows are selected and ordered.
- B. The validity of the SQL statement is established.
- C. An area of memory is established to process the SQL statement.

- D. The SQL statement is run and the number of rows processed is returned.
- E. The area of memory established to process the SQL statement is released.

Answer: D

All SQL statements have to go through various stages. Some stages may be skipped.

1. Parse

Every SQL statement must be parsed. Parsing the statement includes checking the statement's syntax and validating the statement, ensuring that all references to objects are correct, and ensuring that the relevant privileges to those objects exist.

2. Bind

After parsing, the Oracle server knows the meaning of the Oracle statement but still may not have enough information to execute the statement. The Oracle server may need values for any bind variable in the statement. The process of obtaining these values is called binding variables.

3. Execute

At this point, the Oracle server has all necessary information and resources, and the statement is executed.

4. Fetch

In the fetch stage, rows are selected and ordered (if requested by the query), and each successive fetch retrieves another row of the result, until the last row has been fetched. You can fetch queries, but not the DML statements.

QUESTION 17:

What part of a database trigger determines the number of times the trigger body executes?

- A. Trigger type
- B. Trigger body
- C. Trigger event
- D. Trigger timing

Answer: A

QUESTION 18:

Examine this code:

```
CREATE OR REPLACE FUNCTION gen_email_name
(p_first_name VARCHAR2, p_last_name VARCHAR2, p_id NUMBER)
RETURN VARCHAR2
is
v_email_name VARCHAR2(19);
BEGIN
v_email_home := SUBSTR(p_first_name, 1, 1) ||
```

```
SUBSTR(p_last_name, 1, 7) ||  
'@Oracle.com';  
UPDATE employees  
SET email = v_email_name  
WHERE employee_id = p_id;  
RETURN v_email_name;  
END;
```

You run this SELECT statement:

```
SELECT first_name, last_name  
gen_email_name(first_name, last_name, 108) EMAIL  
FROM employees;
```

What occurs?

- A. Employee 108 has his email name updated based on the return result of the function.
- B. The statement fails because functions called from SQL expressions cannot perform DML.
- C. The statement fails because the function does not contain code to end the transaction.
- D. The SQL statement executes successfully, because UPDATE and DELETE statements are ignored in stored functions called from SQL expressions.
- E. The SQL statement executes successfully and control is passed to the calling environment.

Answer: B

- When called from a SELECT statement or a parallelized UPDATE or DELETE statement, the function cannot modify any database tables
- When called from an UPDATE, or DELETE statement, the function cannot query or modify any database tables modified by that statement.
- When called from a SELECT, INSERT, UPDATE, or DELETE statement, the function cannot execute SQL transaction control statements (such as COMMIT), session control statements (such as SET ROLE), or system control statements (such as ALTER SYSTEM). Also, it cannot execute DDL statements (such as CREATE) because they are followed by an automatic commit.
- The function cannot call another subprogram that breaks one of the above restrictions.

QUESTION 19:

Which table should you query to determine when your procedure was last compiled?

- A. USER_PROCEDURES
- B. USER_PROCS
- C. USER_OBJECTS
- D. USER_PLSQL_UNITS

Answer: C

In the USER_OBJECTS there is

Incorrect Answers

- A. USER_PROCEDURES lists all functions and procedures, along with associated properties. For example, ALL_PROCEDURES indicates whether or not a function is pipelined, parallel enabled or an aggregate function. If a function is pipelined or an aggregate function, the associated implementation type (if any) is also identified. It doesn't have when the object was last compiled.
- B. There is nothing called USER_PROCS.
- D. There is nothing called USER_PLSQL_UNITS

QUESTION 20:

Examine this code:

```
CREATE OR REPLACE TRIGGER secure_emp
BEFORE LOGON ON employees
BEGIN
IF (TO_CHAR(SYSDATE, 'DY') IN ('SAT', 'SUN')) OR
(TO_CHAR(SYSDATE, 'HH24:MI')
NOT BETWEEN '08:00' AND '18:00')
THEN RAISE_APPLICATION_ERROR (-20500, 'You may
insert into the EMPLOYEES table only during
business hours. ');
END IF;
END;
/
```

What type of trigger is it?

- A. DML trigger
- B. INSTEAD OF trigger
- C. Application trigger
- D. System event trigger
- E. This is an invalid trigger.

Answer: E

Explanation:

The Triggering Event is incorrect. A User does not LOGON or LOGOFF from a Table. You can't create a BEFORE LOGON or AFTER LOGOFF trigger.

Event	When allowed or applicable
-------	----------------------------

STARTUP	AFTER
---------	-------

SHUTDOWN	BEFORE
----------	--------

SERVERERROR	AFTER
-------------	-------

LOGON AFTER
LOGOFF BEFORE

- A. This trigger is not performing an INSERT, UPDATE or DELETE on Table
- B. INSETED OF Triggers are defined on a VIEW
- C. Application triggers fire when a particular event occurs in the application. Application triggers are developed using Oracle client-side tools, such as Oracle Forms Developer.
- E. This is a failed attempt of creating a System Event Triiger. Modify the code to specify AFTER LOGON ON DATABASE to correct the problem .

QUESTION 21:

Examine this package:

```
CREATE OR REPLACE PACKAGE discounts
IS
g_id NUMBER := 7829;
discount_rate NUMBER := 0.00;
PROCEDURE display_price (p_price NUMBER);
END discounts;
/
CREATE OR REPLACE PACKAGE BODY discounts
IS
PROCEDURE display_price (p_price NUMBER)
IS
BEGIN
DBMS_OUTPUT.PUT_LINE('Discounted '||
TO_CHAR(p_price*NVL(discount_rate, 1)));
END display_price;
BEGIN
/
discount_rate := 0.10;
END discounts;
```

Which statement is true?

- A. The value of DISCOUNT_RATE always remains 0.00 in a session.
- B. The value of DISCOUNT_RATE is set to 0.10 each time the package is invoked in a session.
- C. The value of DISCOUNT_RATE is set to 1.00 each time the procedure DISPLAY_PRICE is invoked.
- D. The value of DISCOUNT_RATE is set to 0.10 when the package is invoked for the first time in a session.

Answer: D

A one-time-only procedure is executed only once, when the package is first invoked within the user session

QUESTION 22:

Examine this code:

```
CREATE OR REPLACE TRIGGER update_emp
AFTER UPDATE ON emp
BEGIN
INSERT INTO audit_table (who, dated)
VALUES (USER, SYSDATE);
END;
```

You issue an UPDATE command in the EMP table that results in changing 10 rows.

How many rows are inserted into the AUDIT_TABLE?

- A. 1
- B. 10
- C. None
- D. A value equal to the number of rows in the EMP table.

Answer: A

Explanation:

Since the Trigger Type is not specified this Trigger defaults to a FOR EACH STATEMENT Trigger. FOR EACH STATEMENT fire once for the triggering event, therefore one record will be inserted into the audit_table.

Incorrect Answers

- B. If this was a FOR EACH ROW Trigger 10 rows would be inserted into the audit_table.
- C. This trigger will fire & result in 1 record inserted into the audit_table
- D. If all records were updated and the Trigger was a FOR EACH ROW Level Trigger then this would be the correct Response

QUESTION 23:

Examine this package:

```
CREATE OR REPLACE PACKAGE BB_PACK
IS
V_MAX_TEAM_SALARY NUMBER(12,2);
PROCEDURE ADD_PLAYER(V_ID IN NUMBER, V_LAST_NAME VARCHAR2,
V_SALARY_NUMBER;
END BB_PACK;
```

/

```
CREATE OR REPLACE PACKAGE BODY BB_PACK
IS
PROCEDURE UPD_PLAYER_STAT
(V_ID IN NUMBER, V_AB IN NUMBER DEFAULT 4, V_HITS IN
NUMBER)
IS
BEGIN
UPDATE PLAYER_BAT_STAT
SET AT_BATS = AT_BATS + V_AB,
HITS = HITS + V_HITS
WHERE PLAYER_ID = V_ID)
COMMIT;
END UPD_PLAYER_STAT;
PROCEDURE ADD_PLAYER
(V_ID IN NUMBER, V_LAST_NAME VARCHAR2, V_SALARY NUMBER)
IS
BEGIN
INSERT INTO PLAYER(ID, LAST_NAME, SALARY)
VALUES (V_ID, V_LAST_NAME, V_SALARY);
UPD_PLAYER_STAT(V_ID, 0.0);
END ADD_PLAYER;
END BB_PACK;
```

Which statement will successfully assign \$75,000,000 to the V_MAX_TEAM_SALARY variable from within a stand-alone procedure?

- A. V_MAX_TEAM_SALARY := 7500000;
- B. BB_PACK.ADD_PLAYER.V_MAX_TEAM_SALARY := 75000000;
- C. BB_PACK.V_MAX_TEAM_SALARY := 75000000;
- D. This variable cannot be assigned a value from outside the package.

Answer: C

To assign a value for a public variable which is declared in the package header, all what you have to do is do user the following syntax
package_name.var_name:=value;

QUESTION 24:

There is a CUSTOMER table in a schema that has a public synonym CUSTOMER and you are granted all object privileges on it. You have a procedure PROCESS_CUSTOMER that processes customer information that is in the public synonym CUSTOMER table. You have just created a new table called CUSTOMER within your schema.

Which statement is true?

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- A. Creating the table has no effect and procedure PROCESS_CUSTOMER still accesses data from public synonym CUSTOMER table.
- B. If the structure of your CUSTOMER table is the same as the public synonym CUSTOMER table then the procedure PROCESS_CUSTOMER is invalidated and gives compilation errors.
- C. If the structure of your CUSTOMER table is entirely different from the public synonym CUSTOMER table then the procedure PROCESS_CUSTOMER successfully recompiles and accesses your CUSTOMER table.
- D. If the structure of your CUSTOMER table is the same as the public synonym CUSTOMER table then the procedure PROCESS_CUSTOMER successfully recompiles when invoked and accesses your CUSTOMER table.

Answer: D

The procedure will first look in the owner of the procedure schema before looking for the public synonym.

Incorrect Answers:

A, B, C

QUESTION 25:

Which two statements about packages are true? (Choose two)

- A. Both the specification and body are required components of a package.
- B. The package specification is optional, but the package body is required.
- C. The package specification is required, but the package body is optional.
- D. The specification and body of the package are stored together in the database.
- E. The specification and body of the package are stored separately in the database.

Answer: C,E

Explanation:

Correct Answer C: A Package must have a specification. A Package may also have a body but it is not necessary. A Package without a package body are referred to as a bodiless package. If a package specification contains only variables, constants, types, exceptions, and a call specification, the package body is not required.

Correct Answer E: The package specification and body are stored separately in the database.

Incorrect Answers:

- A. A package body is optional
- B. The package specification is required and the package body is optional
- D. The package specification and the body are stored in the database as separate objects.

QUESTION 26:

When creating a function in SQL *Plus, you receive this message:

"Warning: Function created with compilation errors."

Which command can you issue to see the actual error message?

- A. SHOW FUNCTION_ERROR
- B. SHOW USER_ERRORS
- C. SHOW ERRORS
- D. SHOW ALL_ERRORS

Answer: C

Explanation:

Correct Answer C: The SQL *Plus command SHOW ERRORS or SHOW ERR

Command extracts the error information from the USER_ERRORS view

Incorrect Errors

- A. this is an invalid object
- B & C are Invalid Commands

QUESTION 27:

Which four triggering events can cause a trigger to fire? (Choose four)

- A. A specific error or any errors occurs.
- B. A database is shut down or started up.
- C. A specific user or any user logs on or off.
- D. A user executes a CREATE or an ALTER table statement.
- E. A user executes a SELECT statement with an ORDER BY clause.
- F. A user executes a JOIN statement that uses four or more tables.

Answer: A,B,C,D

Explanation:

Correct Answers

A, B & C: These are system events. Triggering events that cause system triggers to fire are Server Errors, Users Logging on or off the database, Database startup or shutdown,

D: Database Triggers fire on DDL Statements including a CREATE, ALTER or DROP of a Table

QUESTION 28:

Examine this procedure:

```
CREATE OR REPLACE PROCEDURE ADD_PLAYER
```

```
(V_ID IN NUMBER, V_LAST_NAME VARCHAR2)
IS
BEGIN
INSERT INTO PLAYER (ID, LAST_NAME)
VALUES (V_ID, V_LAST_NAME);
COMMIT;
END;
```

This procedure must invoke the APD_BAT_STAT procedure and pass a parameter.

Which statement, when added to the above procedure will successfully invoke the UPD_BAT_STAT procedure?

- A. EXECUTE UPD_BAT_STAT(V_ID);
- B. UPD_BAT_STAT(V_ID);
- C. RUN UPD_BAT_STAT(V_ID);
- D. START UPD_BAT_STAT(V_ID);

Answer: B

Explanation:

Correct Answers

Answer B

When invoking a Procedure from within another procedure you omit the EXECUTE. You call the Procedure by specifying the Procedure Name and the argument list and a semi-colon

Incorrect Answers:

- A. You omit the EXECUTE when calling a procedure from within a procedure.
- C. RUN is not valid for invoking a procedure
- D. Is invalid for invoking a procedure

QUESTION 29:

Which statement about triggers is true?

- A. You use an application trigger to fire when a DELETE statement occurs.
- B. You use a database trigger to fire when an INSERT statement occurs.
- C. You use a system event trigger to fire when an UPDATE statement occurs.
- D. You use INSTEAD OF trigger to fire when a SELECT statement occurs.

Answer: B

Explanation:

Answer: B Database trigger - Fires when a particular event occurs in the database.

The events that fire a database trigger are Data events and System events. Data events consist of DML statements (INSERT, UPDATE & DELETE) and DDL statements, such as CREATE or DROP. System Events Comprised of actions that are performed either at the schema level or database level.

Incorrect Answers:

- A. An Application trigger fires when a particular event occurs in the application. Application triggers are developed using Oracle client-side tools, such as Oracle Forms Developer.
- C. The events that cause triggers created on system events to fire are: DDL statement on an object, Users logging on or off the database, Database shutdown or startup & Server errors.
- D. You can create an INSTEAD OF trigger on a view and use the trigger to perform DML on a view that is inherently non-updatable.

QUESTION 30:

You want to create a PL/SQL block of code that calculates discounts on customer orders. -This code will be invoked from several places, but only within the program unit ORDERTOTAL.

What is the most appropriate location to store the code that calculates the discounts?

- A. A stored procedure on the server.
- B. A block of code in a PL/SQL library.
- C. A standalone procedure on the client machine.
- D. A block of code in the body of the program unit ORDERTOTAL.
- E. A local subprogram defined within the program unit ORDERTOTAL.

Answer: E

QUESTION 31:

Which type of argument passes a value from a procedure to the calling environment?

- A. VARCHAR2
- B. BOOLEAN
- C. OUT
- D. IN

Answer: C

Explanation:

Parameters that are defined with an OUT mode the parameter will pass their value from the procedure back to the calling environment.

Incorrect Answers:

- A. This is a DataType not a parameter
 - B. This is a DataType not a parameter
 - D. When a parameter is defined with an IN mode, the parameter will only accept input from the calling environment.
-

QUESTION 32:

You create a DML trigger. For the timing information, which is valid with a DML trigger?

- A. DURING
- B. INSTEAD
- C. ON SHUTDOWN
- D. BEFORE
- E. ON STATEMENT EXECUTION

Answer: D

Explanation:

BEFORE, AFTER and INSTEAD are valid Trigger Timing Events

Incorrect Answers:

A, C & E are not a valid Trigger Timing event

B. INSTEAD OF, NOT INSTEAD is a valid DML Trigger Timing Event for a view

QUESTION 33:

You are about to change the arguments of the CALC_TEAM_AVG function. Which dictionary view can you query to determine the names of the procedures and functions that invoke the CALC_TEAM_AVG function?

- A. USER_PROC_DEPENDS
- B. USER_DEPENDENCIES
- C. USER_REFERENCES
- D. USER_SOURCE

Answer: B

Explanation:

The data dictionary view USER_DEPENDENCIES displays information about all direct dependencies within your schema.

Incorrect Answers:

A & C are not valid dictionary views

D. USER_SOURCE: Provides the name and the source code for all procedures created by

the owner. The source code appears in the TEXT column, and the name of the procedure appears in the NAME column.

QUESTION 34:

A CALL statement inside the trigger body enables you to call _____.

- A. A package.
- B. A stored function.
- C. A stored procedure.
- D. Another database trigger.

Answer: C

Explanation:

Incorrect Answers:

- A. Package can't be called, we call a procedure inside the package.
 - B. We can't call a function use CALL statement because function must return a value.
 - D. Trigger can't be called, they are execute automatically when the trigger event occure.
-

QUESTION 35:

You need to remove the database trigger BUSINESS_HOUR.

Which command do you use to remove the trigger in the SQL *Plus environment?

- A. DROP TRIGGER business_hour;
- B. DELETE TRIGGER business_hour;
- C. REMOVE TRIGGER business_hour;
- D. ALTER TRIGGER business_hour REMOVE;
- E. DELETE FROM USER_TRIGGERS WHERE TRIGGER_NAME = 'BUSINESS_HOUR';

Answer: A

Explanation:

To permanently remove a trigger from a database, you can use the DROP TRIGGER statement. The

syntax of this statement is:

DROP TRIGGER ;

B, C & D. Are invalid and will return an error

E. This statement would attempt to delete a record from the USER_Triggers View

QUESTION 36:

How can you migrate from a LONG to a LOB data type for a column?

- A. Use the DBMS_MANAGE_LOB.MIGRATE procedure.
- B. Use the UTL_MANAGE_LOB.MIGRATE procedure.
- C. Use the DBMS_LOB.MIGRATE procedure.
- D. Use the ALTER TABLE command.
- E. You cannot migrate from a LONG to a LOB data type for a column.

Answer: D

Explanation:

In Oracle9i, a LONG column in a table can be migrated to a LOB column using the ALTER TABLE statement. The syntax is:

```
ALTER TABLE <schema>.<table name> MODIFY <long column name> {CLOB | BLOB [NCLOB]}
```

Incorrect Answers:

- A & B These are invalid packages and there is not a Migrate Procedure
- C. This is not a valid procedure
- E. LONG Data Types are migrated to LOB's using the ALTER TABLE Statement

QUESTION 37:

Examine this procedure:

```
CREATE OR REPLACE PROCEDURE INSERT_TEAM
(V_ID in NUMBER, V_CITY in VARCHAR2 DEFAULT 'AUSTIN',
V_NAME in VARCHAR2)
IS
BEGIN
INSERT INTO TEAM (id, city, name)
VALUES (v_id, v_city, v_name);
COMMIT;
END
```

Which two statements will successfully invoke this procedure in SQL *Plus? (Choose two)

- A. EXECUTE INSERT_TEAM;
- B. EXECUTE INSERT_TEAM(3, V_NAME=>'LONGHORNS', V_CITY=>'AUSTIN');
- C. EXECUTE INSERT_TEAM(3, 'AUSTIN','LONGHORNS');
- D. EXECUTE INSERT_TEAM (V_ID := V_NAME := 'LONGHORNS',

```
V_CITY := 'AUSTIN');  
E. EXECUTE INSERT_TEAM (3, 'LONGHORNS');
```

Answer: B,C

Explanation:

B: This statement correctly uses mixed notation. The following example uses named notation for passing actual parameters to a procedure:

```
EXECUTE my_procedure (p_deptcode=>10, p_empid => 1);
```

C. This statement correctly uses positional notation

Incorrect Answers:

A. This statement will fail because parameters are not specified for V_ID and V_NAME arguments and there are no default values specified in the procedure. Formal parameters that do not have any default values assigned in the parameter list must be provided the actual values when the procedure is invoked. When invoking a procedure, you cannot omit the actual value of a formal parameter that does not have a default value.

D. This is incorrect syntax for named notation. The following example demonstrates using named notation for passing actual parameters to the above created procedure my_procedure:

```
EXECUTE my_procedure (p_deptcode=>10, p_empid => 1);
```

E. This statement will fail because a parameter is not supplied to the V_Name argument and a default value is not specified in the procedure.

QUESTION 38:

To be callable from a SQL expression, a user-defined function must do what?

- A. Be stored only in the database.
- B. Have both IN and OUT parameters.
- C. Use the positional notation for parameters.
- D. Return a BOOLEAN or VARCHAR2 data type.

Answer: C

Explanation:

Functions called from SQL statements must use positional notation to pass values to the IN parameters.

Incorrect Answers:

A. Functions invoked using SQL statements must be stored in the database, however if they are stored on the client this alone will not cause the statement to fail.

B. The function must only have parameters of the IN Mode for them to be used in a SQL Expression.

D. You cannot use PL/SQL data types, such as BOOLEAN, RECORD, or TABLE for returning values for the function to be callable from a SQL expression.

QUESTION 39:

Which two describe a stored procedure? (Choose two)

- A. A stored procedure is typically written in SQL.
- B. A stored procedure is a named PL/SQL block that can accept parameters.
- C. A stored procedure is a type of PL/SQL subprogram that performs an action.
- D. A stored procedure has three parts: the specification, the body, and the exception handler part.
- E. The executable section of a stored procedure contains statements that assigns values, control execution, and return values to the calling environment.

Answer: B,C

A procedure is a named PL/SQL block that can accept parameters (sometimes referred to as arguments), and be invoked. Generally speaking, you use a procedure to perform an action. A procedure has a header, a declaration section, an executable section, and an optional exception-handling section.

A procedure can be compiled and stored in the database as a schema object.

Procedures promote reusability and maintainability. When validated, they can be used in any number of applications. If the requirements change, only the procedure needs to be updated.

QUESTION 40:

Examine this code:

```
CREATE OR REPLACE PROCEDURE add_dept
(p_name departments.department_name%TYPE DEFAULT
'unknown',
p_loc departments.location_id%TYPE DEFAULT 1700)
IS
BEGIN
INSERT INTO departments(department_id, department_name,
location_id)
VALUES(dept_seq.NEXTVAL,p_name, p_loc);
END add_dept;
/
```

You created the add_dept procedure above, and you now invoke the procedure in SQL *Plus.

Which four are valid invocations? (Choose four)

- A. EXECUTE add_dept(p_loc=>2500)
- B. EXECUTE add_dept('Education', 2500)
- C. EXECUTE add_dept('2500', p_loc =>2500)
- D. EXECUTE add_dept(p_name=>'Education', 2500)

E. EXECUTE add_dept(p_loc=>2500, p_name=>'Education')

Answer: A,B,C,E

Explanation:

A. This statement correctly uses named notation. A Default value is defined for both parameters in the procedure so it is not necessary to pass any parameters.

B. This statement correct uses positional notation.

C. This statement correctly uses mixed notation.

E. This statement correctly uses named notation.

Incorrect Answers

D. When using mixed notation to pass the values, all the parameters specified with positional notation

must precede the parameters specified with named notation in the subprogram call.

If the parameters specified with positional notation do not precede the parameters specified with named

notation, the following error is generated at run time:

PLS-00312: a positional parameter association may not follow a named

QUESTION 41:

Which three are valid ways to minimize dependency failure? (Choose three)

A. Querying with the SELECT * notation.

B. Declaring variables with the %TYPE attribute.

C. Specifying schema names when referencing objects.

D. Declaring records by using the %ROWTYPE attribute.

E. Specifying package.procedure notation while executing procedures.

Answer: A,B,D

Explanation:

A. Use the SELECT * notation. This will minimize recompilation failures because SELECT *

will select all the columns of the table. If you add or remove any column from the table, the SELECT statement will not be impacted by the change in the table and will require no

changes to the program unit.

B, D. Use the %ROWTYPE to declare records and %TYPE to declare variables. This allows you to

declare records and variables that inherit the data types of the underlying columns of the base

tables, rather than defining the data type of each variable in the program unit. The

%ROWTYPE

and %TYPE attributes provide you the flexibility to change the data types of the columns of the table without having to modify the data types specified in the program unit.

QUESTION 42:

Which two does the INSTEAD OF clause in a trigger identify? (Choose two)

- A. The view associated with the trigger.
- B. The table associated with the trigger.
- C. The event associated with the trigger.
- D. The package associated with the trigger.
- E. The statement level or for each row association to the trigger.

Answer: A,C

Explanation:

Answer A is correct. You must specify the View. INSTEAD OF TRIGGERS are created on views to allow DML statements on an on-updateable view.

Answer C is correct. An INSETED OF Trigger can fire for all three Triggering Events (INSERT, UPDATE and UPDATE).

Answer B is incorrect INSTEAD of Triggers can only be created for Views they can't be created on Tables.

Answer D is incorrect. You can't call a package.

Answer E is incorrect. INSTEAD OF TRIGGERS must always fire FOR EACH ROW; STATEMENT Level Triggers are not valid for Views

QUESTION 43:

Examine this package:

```
CREATE OR REPLACE PACKAGE manage_emp
IS
tax_rate CONSTANT NUMBER(5,2) := .28;
v_id NUMBER;
PROCEDURE insert_emp (p_deptno NUMBER, p_sal NUMBER);
PROCEDURE delete_emp;
PROCEDURE update_emp;
FUNCTION calc_tax (p_sal NUMBER)
RETURN NUMBER;
END manage_emp;
/
CREATE OR REPLACE PACKAGE BODY manage_emp
IS
```

```
PROCEDURE update_sal
(p_raise_amt NUMBER)
IS
BEGIN
UPDATE emp
SET sal = (sal * p_raise_amt) + sal
WHERE empno = v_id;
END;
PROCEDURE insert_emp
(p_deptno NUMBER, p_sal NUMBER)
IS
BEGIN
INSERT INTO emp(empno, deptno, sal)
VALUES(v_id, p_deptno, p_sal);
END insert_emp;
PROCEDURE delete_emp
IS
BEGIN
DELETE FROM emp
WHERE empno = v_id;
END delete_emp;
PROCEDURE update_emp
IS
v_sal NUMBER(10, 2);
v_raise NUMBER(10, 2);
BEGIN
SELECT sal
INTO v_sal
FROM emp
WHERE empno = v_id;
IF v_sal < 500 THEN
v_raise := .05;
ELSIF v_sal < 1000 THEN
v_raise := .07;
ELSE
v_raise := .04;
END IF;
update_sal(v_raise);
END update_emp;
FUNCTION calc_tax
(p_sal NUMBER)
RETURN NUMBER
IS
BEGIN
RETURN p_sal * tax_rate;
END calc_tax;
```

```
END manage_emps;  
/
```

What is the name of the private procedure in this package?

- A. CALC_TAX
- B. INSERT_EMP
- C. UPDATE_SAL
- D. DELETE_EMP
- E. UPDATE_EMP
- F. MANAGE_EMPS

Answer: C

Explanation:

This procedure is not declared in the package specification and therefore it is not public. Constructs declared and defined in the package body are known as private constructs. These constructs are available from inside the package only and cannot be called from outside the package.

Incorrect Answers

A, B, D & E Procedures declared in the package specification are public constructs and they can be

referenced from outside the package.

F. Is the Package Name and it is not a Public or Private Procedure

QUESTION 44:

What can you do with the DBMS_LOB package?

- A. Use the DBMS_LOB.WRITE procedure to write data to a BFILE.
- B. Use the DBMS_LOB.BFILENAME function to locate an external BFILE.
- C. Use the DBMS_LOB.FILEEXISTS function to find the location of a BFILE.
- D. Use the DBMS_LOB.FILECLOSE procedure to close the file being accessed.

Answer: D

Incorrect Answers:

A. DBMS_LOB.WRITE is used to write to Internal LOBs.

The internal LOB is stored inside the Oracle server. A BLOB, NCLOB, or CLOB can be one of the following:

An attribute of a user-defined type

A column in a table

A bind or host variable

A PL/SQL variable, parameter, or result

Internal LOBs can take advantage of Oracle features such as:

Concurrency mechanisms

Redo logging and recovery mechanisms

Transactions with commit or rollbacks

B. BFILENAME is a built-in function that initializes a BFILE column to point to an external file. Use the BFILENAME function as part of an INSERT statement to initialize a BFILE column by associating it with a physical file in the server file system. You can use the UPDATE statement to change the reference target of the BFILE. A BFILE can be initialized to NULL and updated later by using the BFILENAME function.

C. DBMS_LOB.FILEEXISTS function to find if the file exists on the server

QUESTION 45:

Examine this package:

```
CREATE OR REPLACE PACKAGE BB_PACK
IS
V_MAX_TEAM_SALARY NUMBER(12,2);
PROCEDURE ADD_PLAYER(V_ID IN NUMBER, V_LAST_NAME VARCHAR2,
V_SALARY NUMBER);
END BB_PACK;
/
CREATE OR REPLACE PACKAGE BODY BB_PACK
IS
V_PLAYER_AVG NUMBER(4,3);
PROCEDURE UPD_PLAYER_STAT
V_ID IN NUMBER, V_AB IN NUMBER DEFAULT 4, V_HITS IN NUMBER)
IS
BEGIN
UPDATE PLAYER_BAT_STAT
SET AT_BATS = AT_BATS + V_AB,
HITS = HITS + V_HITS
WHERE PLAYER_ID = V_ID;
COMMIT;
VALIDATE_PLAYER_STAT(V_ID);
END UPD_PLAYER_STAT;
PROCEDURE ADD_PLAYER
(V_ID IN NUMBER, V_LAST_NAME VARCHAR2, V_SALARY NUMBER)
IS
BEGIN
INSERT INTO PLAYER(ID, LAST_NAME, SALARY)
VALUES (V_ID, V_LAST_NAME, V_SALARY);
UPD_PLAYER_STAT(V_ID, 0, 0);
END ADD_PLAYER;
END BB_PACK
/
```

Which statement will successfully assign .333 to the V_PLAYER_AVG variable from a procedure outside the package?

- A. V_PLAYER_AVG := .333;
- B. BB_PACK.UPD_PLAYER_STAT.V_PLAYER_AVG := .333;
- C. BB_PACK.V_PLAYER_AVG := .333;
- D. This variable cannot be assigned a value from outside of the package.

Answer: D

Explanation:

Constructs declared and defined in the package body are private constructs and they can't be invoked outside of the package.

Incorrect Answers

- A. Even if this variable was declared in the package specification, this is the wrong syntax for referencing a global variable from outside the package.
- B. Nice try but this is wrong, you can't reference a package that is defined in the package body from outside of the package.
- C. This is the correct syntax for assigning a value to a global variable but this is wrong because the variable was not declared in the package specification.

QUESTION 46:

Examine this code:

```
CREATE OR REPLACE PACKAGE comm_package
IS
g_comm NUMBER := 10;
PROCEDURE reset_comm(p_comm IN NUMBER);
END comm_package;
/
```

User Jones executes the following code at 9:01am:

```
EXECUTE comm_package.g_comm := 15
```

User Smith executes the following code at 9:05am:

```
EXECUTE comm_package.g_comm := 20
```

Which statement is true?

- A. g_comm has a value of 15 at 9:06am for Smith.
- B. g_comm has a value of 15 at 9:06am for Jones.
- C. g_comm has a value of 20 at 9:06am for both Jones and Smith.
- D. g_comm has a value of 15 at 9:03 am for both Jones and Smith.
- E. g_comm has a value of 10 at 9:06am for both Jones and Smith.
- F. g_comm has a value of 10 at 9:03am for both Jones and Smith

Answer: B

QUESTION 47:

Examine this code:

```
CREATE OR REPLACE FUNCTION gen_email_name
(p_first_name VARCHAR2, p_last_name VARCHAR2, p_id NUMBER)
RETURN VARCHAR2
IS
v_email_name VARCHAR2(19);
BEGIN
v_email_name := SUBSTR(p_first_name, 1, 1) ||
SUBSTR(p_last_name, 1, 7) ||
'@Oracle.com';
UPDATE employees
SET email = v_email_name
WHERE employee_id = p_id;
RETURN v_email_name;
END;
```

Which statement removes the function?

- A. DROP FUNCTION gen_email_name;
- B. REMOVE gen_email_name;
- C. DELETE gen_email_name;
- D. TRUNCATE gen_email_name;
- E. ALTER FUNCTION gen_email_name REMOVE;

Answer: A

Explanation:

Stored functions can be permanently removed from the database by dropping them. You use the following statement for dropping a stand-alone stored function:

```
DROP FUNCTION ;
```

Answers B, C, D & E are incorrect & will generate errors

QUESTION 48:

Examine this procedure:

```
CREATE OR REPLACE PROCEDURE UPD_BAT_STAT
(V_ID IN NUMBER DEFAULT 10, V_AB IN NUMBER DEFAULT 4)
IS
BEGIN
UPDATE PLAYER_BAT_STAT
SET AT_BATS = AT_BATS + V_AB
WHERE PLAYER_ID = V_ID;
COMMIT;
```

END;

Which two statements will successfully invoke this procedure in SQL *Plus? (Choose two)

- A. EXECUTE UPD_BAT_STAT;
- B. EXECUTE UPD_BAT_STAT(V_AB=>10, V_ID=>31);
- C. EXECUTE UPD_BAT_STAT(31, 'FOUR', 'TWO');
- D. UPD_BAT_STAT(V_AB=>10, V_ID=>31);
- E. RUN UPD_BAT_STAT;

Answer: A,B

Explanation:

A. This is the correct syntax for invoking a function from SQL *Plus. Actual parameters are not needed since the procedure has default values defined for each formal parameter. The EXECUTE or EXEC statement is used to invoke an independent procedure from SQL*Plus. The EXECUTE or EXEC keyword is followed by the name of the procedure and arguments.

B. This is the correct syntax for invoking this function using positional notation.

Incorrect Answers

C. This would fail, too many parameters are passed. The procedure being called only has two parameters.

D. If this statement was invoked from inside an anonymous PL/SQL Block or from another procedure you would omit the EXECUTE.

E. Run is not a valid command for invoking a procedure.

QUESTION 49:

Examine this code:

```
CREATE OR REPLACE PROCEDURE audit_action
(p_who VARCHAR2)
AS
BEGIN
INSERT INTO audit(schema_user) VALUES(p_who);
END audit_action;
/
CREATE OR REPLACE TRIGGER watch_it
AFTER LOGON ON DATABASE
CALL audit_action(ora_login_user)
/
```

What does this trigger do?

- A. The trigger records an audit trail when a user makes changes to the database.
- B. The trigger marks the user as logged on to the database before an audit statement is

issued.

C. The trigger invoked the procedure audit_action each time a user logs on to his/her schema and adds the username to the audit table.

D. The trigger invokes the procedure audit_action each time a user logs on to the database and adds the username to the audit table.

Answer: D

Explanation:

This trigger fires after a user connects to a database and inserts a record into the audit table.

Incorrect Answers

A. This Trigger is not defined as a DML Trigger

B. This does not make any sense

C. If you specified to AFTER LOGON ON SCHEMA this would be the correct answer.

QUESTION 50:

Which view displays indirect dependencies, indenting each dependency?

A. DEPTREE

B. IDEPTREE

C. INDENT_TREE

D. I_DEPT_TREE

Answer: B

Explanation:

The IDEPTREE displays the indirect dependencies with indentation. No indent is used on the first line for the object being analyzed; a single indent indicates a direct dependency, a double indent represents an indirect dependency.

Incorrect Answers

A. DEPTREE displays the indirect dependencies without indentation. This view uses a nested_level column with a value of 0,1 or 2 to indicate the nesting level.

C & D are not valid dictionary views

QUESTION 51:

The OLD and NEW qualifiers can be used in which type of

trigger?

- A. Row level DML trigger
- B. Row level system trigger
- C. Statement level DML trigger
- D. Row level application trigger
- E. Statement level system trigger
- F. Statement level application trigger

Answer: A

Explanation:

The qualifiers :OLD and :NEW can only be used with row level DML triggers.

Incorrect Answers

B, C, D, E & F. ROW level triggers do not apply to application or system triggers. The :OLD & :NEW Qualifiers only apply to DML ROW level Triggers.

QUESTION 52:

Which statement is true?

- A. Stored functions can be called from the SELECT and WHERE clauses only.
- B. Stored functions do not permit calculations that involve database links in a distributed environment.
- C. Stored functions cannot manipulate new types of data, such as longitude and latitude.
- D. Stored functions can increase the efficiency of queries by performing functions in the query rather than in the application.

Answer: D

Explanation:

User-defined functions increase the efficiency of queries by applying the functions in the query

itself. This drastically improves the performance because the query is designed to use the function instead of using the query and functions separately from client-side tools when enforcing application logic.

Incorrect Answers

A. Functions can be invoked as part of SELECT statements (in the column list, WHERE, GROUP BY, HAVING and ORDER BY clauses), in the UPDATE statement (in the SET and WHERE clause), in the DELETE statement (in the WHERE clause), and in the INSERT statement (in the VALUES clause).

- B. Functions allow calculations on data across a database link.
- C. Functions can be used to manipulate these data types.

QUESTION 53:

Examine the trigger:

```
CREATE OR REPLACE TRIGGER Emp_count
AFTER DELETE ON Emp_tab
FOR EACH ROW
DECLARE
n INTEGER;
BEGIN
SELECT COUNT(*)
INTO n
FROM Emp_tab;
DBMS_OUTPUT.PUT_LINE(' There are now ' || a ||
' employees,');
END;
```

This trigger results in an error after this SQL statement is entered:

```
DELETE FROM Emp_tab WHERE Empno = 7499;
```

How do you correct the error?

- A. Change the trigger type to a BEFORE DELETE.
- B. Take out the COUNT function because it is not allowed in a trigger.
- C. Remove the DBMS_OUTPUT statement because it is not allowed in a trigger.
- D. Change the trigger to a statement-level trigger by removing FOR EACH ROW.

Answer: D

Explanation:

A mutating table is a table against which a data manipulation statement has been issued and the corresponding trigger on the DML statement is reading from the same table, at the same time.

Mutating tables are not valid for statement triggers because statement triggers fire only once for each event and allow the process to complete before the trigger is actually fired. Row triggers can cause a table to mutate because row triggers fire for each row. To correct this problem you change the trigger to a Statement-Level Trigger by removing FOR EACH ROW or by specifying FOR EACH STATEMENT.

Incorrect Answers

- A. This will still result in an error and it will not achieve the intended result.

- B. You may use the COUNT function in a Trigger.
 - C. The DBMS_OUTPUT statement is allowed in a Trigger .
-

QUESTION 54:

What is true about stored procedures?

- A. A stored procedure uses the DELCLARE keyword in the procedure specification to declare formal parameters.
- B. A stored procedure is named PL/SQL block with at least one parameter declaration in the procedure specification.
- C. A stored procedure must have at least one executable statement in the procedure body.
- D. A stored procedure uses the DECLARE keyword in the procedure body to declare formal parameters.

Answer: C

Explanation:

The executable section must contain at least one executable statement. You can include a NULL keyword to fulfill the need to have at least one executable statement in this section.

For example,

```
BEGIN  
NULL;  
END
```

Incorrect Answers

- A. Local variables are declared after the IS or AS keyword and before the BEGIN keyword. The DECLARE keyword is not used.
- B. It is not required that a Procedure have a parameter.
- D. You do not use the DELCARE keyword when specifying parameters. The syntax for creating a procedure is:

```
CREATE [OR REPLACE] PROCEDURE  
[parameter1 [mode1] datatype1,  
parameter2 [mode2] datatype2,  
...]  
IS | AS  
...  
BEGIN  
...  
EXCEPTION
```

QUESTION 55:

Examine this code:

```
CREATE OR REPLACE PROCEDURE insert_dept
(p_location_id NUMBER)
IS
v_dept_id NUMBER(4);
BEGIN
INSERT INTO departments
VALUES (5, 'Education', 150, p_location_id);
SELECT department_id
INTO v_dept_id
FROM employees
WHERE employee_id=99999;
END insert_dept;
/
CREATE OR REPLACE PROCEDURE insert_location
(p_location_id NUMBER,
p_city VARCHAR2)
IS
BEGIN
INSERT INTO locations(location_id, city)
VALUES (p_location_id, p_city);
insert_dept(p_location_id);
END insert_location;
/
```

You just created the departments, the locations, and the employees table. You did not insert any rows. Next you created both procedures.

You now invoke the insert_location procedure using the following command:

```
EXECUTE insert_location (19, 'San Francisco')
```

What is the result in this EXECUTE command?

- A. The locations, departments, and employees tables are empty.
- B. The departments table has one row.
The locations and the employees tables are empty.
- C. The location table has one row.
The departments and the employees tables are empty.
- D. The locations table and the departments table both have one row.
The employees table is empty.

Answer: A

Explanation:

All of the tables are empty. When the following statement executed:

```
SELECT department_id
INTO v_dept_id
FROM employees
WHERE employee_id = 9999;
```

An error is thrown and there is no exception section in this procedure or the calling procedure, therefore all transactions are rolled back.

Note: If the exception is not handled in the called procedure, the control is transferred to the exception-handling

section of the calling procedure. If the exception is handled, all the statements remain intact. If the

exception is not handled in the calling procedure's exception-handling section, all the statements are

rolled back, and the exception propagates to the calling environment.

Incorrect Answers

B. This is not true because an error is occurs on the SELECT Statement and the INSERT Transaction is rolled back when the error is encountered.

C. The insert into the location table is also rolled back. The insert_locaton calls the insert_dept Stored Procedure, this procedure fails and control is passed back to the calling procedure which does not have an exception section , therefore both the insert into the locations table and the insert into the departments table are rolled back.

D. Due to the lack of exception handling the inserts into the locations & departments are rollback back.

QUESTION 56:

The creation of which database objects will cause a DDL trigger to fire? (Choose all that apply)

- A. Index
- B. Cluster
- C. Package
- D. Function
- E. Synonyms
- F. Dimensions
- G. Database links

Answer: A,B, C,D,E

Explanation:

DDL triggers fire for clusters, functions, indexes, packages, procedures, roles, sequences, synonyms, tables, tablespaces, triggers, types, views, or users.

QUESTION 57:

Which two program declarations are correct for a stored program unit? (Choose two)

- A. CREATE OR REPLACE FUNCTION tax_amt
(p_id NUMBER)

RETURN NUMBER

B. CREATE OR REPLACE PROCEDURE tax_amt
(p_id NUMBER)

RETURN NUMBER

C. CREATE OR REPLACE PROCEDURE tax_amt
(p_id NUMBER, p_amount OUT NUMBER)

D. CREATE OR REPLACE FUNCTION tax_amt
(p_id NUMBER)

RETURN NUMBER(10,2)

E. CREATE OR REPLACE PROCEDURE tax_amt
(p_id NUMBER, p_amount OUT NUMBER(10, 2))

Answer: A,C

Explanation:

A. This is the correct syntax for creating a Function.

The syntax for creating a function is similar to that of creating a procedure with the addition of a RETURN

statement. The following is the syntax for CREATE FUNCTION:

```
CREATE [OR REPLACE] FUNCTION [(parameter [mode1]
```

```
datatype1,
```

```
parameter2 [mode2] datatype2 ...)]
```

```
RETURN datatype
```

```
IS | AS
```

```
PL/SQL BLOCK;
```

C. This is the correct syntax for creating a Procedure. The syntax for creating a procedure is:

```
CREATE [OR REPLACE] PROCEDURE
```

```
[parameter1 [mode1] datatype1,
```

```
parameter2 [mode2] datatype2,
```

```
.. .)]
```

```
IS | AS
```

```
...
```

```
BEGIN
```

```
...
```

```
EXCEPTION
```

```
END ;
```

Incorrect Answers

B. This is incorrect syntax for a Procedure. Functions have a RETURN Clause, Procedures do not.

D. When you define the data type, the length of the data type is not allowed in the parameter list. If you specify the length of a formal parameter, Oracle issues an error at compilation time.

E. The length of the data type is not allowed in the parameter list for functions or procedures.

QUESTION 58:

You need to implement a virtual private database (vpd). In order to have the vpd functionality, a trigger is required to fire when every user initiates a session in the database.

What type of trigger needs to be created?

- A. DML trigger
- B. System event trigger
- C. INSTEAD OF trigger
- D. Application trigger

Answer: B

Explanation:

System Event Triggers can be defined to fire at either at the schema level or database level. You can create a trigger that is fired when a user connects to the database. The triggering event in this case is LOGON. This trigger can be created either at the database level or at the schema level. If the trigger is created at the database level, the trigger is fired for all the users that connect to the database. If the trigger is created at the schema level, the trigger is fired when the user that created the trigger connects to the database.

Incorrect Answers

- A. DML Triggers fire when a DML Operation is perform on a Table BEFORE OR AFTER (Trigger Timing) the DML Event (INSERT, UPDATE or DELETE) on the TABLE.
- C. INSTEAD OF TRIGGERS will fire on a view.
- D. Application trigger - Fires when a particular event occurs in the application. Application triggers are developed using Oracle client-side tools, such as Oracle Forms Developer.

QUESTION 59:

You have a row level BEFORE UPDATE trigger on the EMP table. This trigger contains a SELECT statement on the EMP table to ensure that the new salary value falls within the minimum and maximum salary for a given job title.

What happens when you try to update a salary value in the EMP table?

- A. The trigger fires successfully.
- B. The trigger fails because it needs to be a row level AFTER UPDATE trigger.
- C. The trigger fails because a SELECT statement on the table being updated is not allowed.
- D. The trigger fails because you cannot use the minimum and maximum functions in a BEFORE UPDATE trigger.

Answer: C

Explanation:

This will result in a mutating table. A mutating table is a table against which a data manipulation statement has been issued and the corresponding trigger on the DML statement is reading from the same table, at the same time. To work around this you would need to need to create a statement level trigger with the SELECT statement and place the values into the package variables. Then the ROW Level Trigger could check the values in the package variables.

Incorrect Answers

- A. This trigger would result in a mutating table and would generate an error.
- B. ROW level Triggers result in a mutating table, STATEMENT level triggers do not.
- D. You may use a MINIMUM and MAXIMUM Functions but not in a ROW level Trigger that queries the same table in which a DML operation is being performed.

QUESTION 60:

Examine this code:

```
CREATE OR REPLACE STORED FUNCTION get_sal
(p_raise_amt NUMBER, p_employee_id
employees.employee_id%TYPE)
RETURN NUMBER
IS
v_salaryNUMBER;
v_raise NUMBER(8,2);
BEGIN
SELECT salary
INTO v_salary
FROM employees
WHERE employee_id = p_employee_id;
v_raise := p_raise_amt * v_salary;
RETURN v_raise;
END;
```

Which statement is true?

- A. This statement creates a stored procedure named get_sal.

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- B. This statement returns a raise amount based on an employee id.
- C. This statement creates a stored function named get_sal with a status of invalid.
- D. This statement creates a stored function named get_sal.
- E. This statement fails.

Answer: E

Explanation:

This statement will fail. Remove the STORED from CREATE OR REPLACE STORED FUNCTION

Incorrect Answers

- A. This statement is attempting to create a Function
- B. If there was not a syntax error, this function would return a raise amount based on the raise amount & employee id passed to the function.
- C. The incorrect syntax will prevent the function from being created with a status of invalid.
- D. The incorrect syntax will prevent the function from being.

QUESTION 61:

You need to disable all triggers on the EMPLOYEES table.
Which command accomplishes this?

- A. None of these commands; you cannot disable multiple triggers on a table in one command.
- B. ALTER TRIGGERS ON TABLE employees DISABLE;
- C. ALTER employees DISABLE ALL TRIGGERS;
- D. ALTER TABLE employees DISABLE ALL TRIGGERS;

Answer: D

Explanation:

You can disable all triggers using the ALTER TABLE command. The syntax to disable or re-enable all triggers on a particular table is:

```
ALTER TABLE <table name> DISABLE | ENABLE ALL TRIGGERS
```

Incorrect Answers

- A. This is not true, you can disable all triggers on a table using the ALTER TABLE command
- B & C are incorrect syntax for disabling a Trigger

QUESTION 62:

An internal LOB is _____.

- A. A table.
- B. A column that is a primary key.
- C. Stored in the database.
- D. A file stored outside of the database, with an internal pointer to it from a database column.

Answer: C

Explanation:

Internal LOBs are stored inside the database. To access the internal LOBs, Oracle provides the DBMS_LOB package, which uses the locator to access the LOB values.
Incorrect Answers

- A. An Internal LOB is a Data Type not a Table
- B. An internal LOB is not a column that is a primary key
- D. External LOBs are stored outside the database.

QUESTION 63:

Examine this code:

```
CREATE OR REPLACE FUNCTION calc_sal(p_salary NUMBER)
RETURN NUMBER
IS
v_raise NUMBER(4,2) DEFAULT 1.08;
BEGIN
RETURN v_raise * p_salary;
END calc_sal;
/
```

Which statement accurately call the stored function CALC_SAL? (Choose two)

- A. UPDATE employees (calc_sal(salary))
SET salary = salary * calc_sal(salary);
- B. INSERT calc_sal(salary) INTO employees
WHERE department_id = 60;
- C. DELETE FROM employees(calc_sal(salary))
WHERE calc_sal(salary) > 1000;
- D. SELECT salary, calc_sal(salary)
FROM employees
WHERE department_id = 60;
- E. SELECT last_name, salary, calc_sal(salary)
FROM employees ORDER BY
calc_sal(salary);

Answer: D,E

Explanation:

D. This function is using the function in the column list of the select statement. This function does not perform any DML or violate any of the restriction on functions that are invoked as part of a SQL expression.

E. This function is correctly using the function in the column list and the ORDER BY clause of the select statement.

Functions can be invoked in the column list, WHERE, GROUP BY, HAVING and ORDER BY clauses of a SELECT statement.

Restrictions on functions that are invoked as part of SQL expressions are:

Functions should be stored in the database.

Functions should return data types accepted by SQL.

Functions should not include any transaction, session, or system control statements.

Functions should have formal parameters of the IN mode.

Functions should not modify any database tables, if called as part of a SELECT statement.

Functions should not modify or read the same table, if called as part of an UPDATE or DELETE.

Functions should use only positional to pass values to the formal parameters.

Incorrect Answers

A. Functions can only be invoked in the SET and WHERE clause of an UPDATE statement.

B. Functions can only be invoked in the VALUES clause of an INSERT statement.

C. Functions can only be invoked in the WHERE clause of a DELETE statement.

QUESTION 64:

This statement fails when executed:

```
CREATE OR REPLACE TRIGGER CALC_TEAM_AVG
AFTER INSERT ON PLAYER
BEGIN
INSERT INTO PLAYER_BATSTAT (PLAYER_ID,
SEASON_YEAR, AT_BATS, HITS)
VALUES (:NEW.ID, 1997, 0, 0);
END;
```

To which type must you convert the trigger to correct the error?

A. Row

B. Statement

C. ORACLE FORM trigger

D. Before

Answer: A

Explanation:

The qualifiers :OLD and :NEW can only be used with row triggers. If you attempt to create a statement level trigger using the qualifiers, Oracle generates the following error message at compile time:

ORA-01912: ROW keyword expected

Incorrect Answers

- B. This triggers is a Statement level trigger by default and that is why it is throwing an error.
- C. This needs to be a database trigger ROW level Trigger not a Application client-side Trigger.
- D. The Trigger timing is not relevant to the problem.

QUESTION 65:

Examine this code:

```
CREATE OR REPLACE PROCEDURE audit_emp
(p_id IN emp_empno%TYPE)
IS
v_id NUMBER;
PROCEDURE log_exec
IS
BEGIN
INSERT INTO log_table (user_id, log_delete)
VALUES (USER, SYSDATE);
END log_exec;
v_name VARCHAR2(20);
BEGIN
DELETE FROM emp
WHERE empno = p_id;
log_exec;
SELECT ename, empno
INTO v_name, v_id
FROM emp
WHERE empno = p_id;
END audit_emp;
```

Why does this code cause an error when compiled?

- A. An insert statement is not allowed in a subprogram declaration.
- B. Procedure LOG_EXEC should be declared before any identifiers.
- C. Variable v_name should be declared before declaring the LOG_EXEC procedure.
- D. The LOG_EXEC procedure should be invoked as EXECUTE log_exec with the AUDIT_EMP procedure.

Answer: C

Explanation:

Variables must be declared before declaring any subprograms.

Incorrect Answers

A. You may have An?? Statement in a program declaration

B. The opposite is true

D. You do not use the Execute when calling from a procedure.

QUESTION 66:

Examine this code:

```
CREATE OR REPLACE PACKAGE metric_converter
IS
c_height CONSTRAINT NUMBER := 2.54;
c_weight CONSTRAINT NUMBER := .454;
FUNCTION calc_height (p_height_in_inches NUMBER)
RETURN NUMBER;
FUNCTION calc_weight (p_weight_in_pounds NUMBER)
RETURN NUMBER;
END;
/
CREATE OR REPLACE PACKAGE BODY metric_converter
IS
FUNCTION calc_height (p_height_in_inches NUMBER)
RETURN NUMBER
IS
BEGIN
RETURN p_height_in_inches * c_height;
END calc_height;
FUNCTION calc_weight (p_weight_in_pounds NUMBER)
RETURN NUMBER
IS
BEGIN
RETURN p_weight_in_pounds * c_weight;
END calc_weight;
END metric_converter;
/
CREATE OR REPLACE FUNCTION calc_height (p_height_in_inches
NUMBER)
RETURN NUMBER
IS
BEGIN
RETURN p_height_in_inches * metric_converter.c_height;
END calc_height;
/
```

Which statement is true?

- A. If you remove the package specification, then the package body and the stand alone stored function CALC_HEIGHT are removed.
- B. If you remove the package body, then the package specification and the stand alone stored function CALC_HEIGHT are removed.
- C. If you remove the package specification, then the package body is removed.
- D. If you remove the package body, then the package specification is removed.
- E. If you remove the stand alone stored function CALC_HEIGHT, then the METRIC_CONVERTER package body and the package specification are removed.
- F. The stand alone function CALC_HEIGHT cannot be created because its name is used in a packaged function.

Answer: C

Explanation:

If you remove the package specification, the package body will be removed.

To remove the package specification and the package body from the database, you use the following

syntax:

`DROP PACKAGE ;`

The DROP PACKAGE statement removes both the package specification and the package body from the database.

Incorrect Answers

A. If you remove the package specification the package body will also be deleted. To delete a stand-alone procedure you must issue a DROP PROCEDURE ProcedureName command.

B. If you remove the package body only the package body is removed by the DROP PACKAGE BODY command. To delete the package specification and the package body you issue a DROP PACKAGE Command. Dropping a Package has no impact on stand-alone procedures.

D. The DROP PACKAGE BODY statement removes only the package body. The package specification remains intact in the database. The status of the package specification remains VALID even if the corresponding package body is dropped from the database.

To remove only the package body from the database, you use the following syntax:

`DROP PACKAGE BODY ;`

E. Dropping a stand-alone procedure or function does not drop any package objects.

F. You may have stand-alone functions & procedures with the same name as a Packaged program units. They are stored separately and they are qualified using the Package Name when calling the Package Procedure or function.

QUESTION 67:

What is a condition predicate in a DML trigger?

- A. A conditional predicate allows you to specify a WHEN-LOGGING-ON condition in the trigger body.
- B. A conditional predicate means you use the NEW and OLD qualifiers in the trigger body as a condition.
- C. A conditional predicate allows you to combine several DBM triggering events into one in the trigger body.
- D. A conditional predicate allows you to specify a SHUTDOWN or STARTUP condition in the trigger body.

Answer: C

Explanation:

A trigger can fire for all three DML statements, INSERT, UPDATE, and DELETE. You can create a single trigger that fires whenever any of the three events occur. You can determine which one of the three DML statements caused the trigger to fire. There three conditional predicates are INSERTING, UPDATING, and DELETING. All three predicates are BOOLEAN values indicating a TRUE or FALSE value in response to the triggering event that fired the trigger. You can check these BOOLEAN values to control processing within the trigger body.

Incorrect Answers

- A. This does not exist in Oracle
- B. These have nothing to do with conditional predicates. The :OLD & :NEW qualifiers are used in ROW level Triggers to reference the incoming data using the :NEW prefix and refer to the data already in the database using the :OLD prefix.
- D. These are System Events that can be used with triggers but they have no bearing on conditional predicates.

QUESTION 68:

Examine this package specification:

```
CREATE OR REPLACE PACKAGE concat_all
IS
v_string VARCHAR2(100);
PROCEDURE combine (p_num_val NUMBER);
PROCEDURE combine (p_date_val DATE);
PROCEDURE combine (p_char_val VARCHAR2, p_num_val NUMBER);
END concat_all;
/
```

Which overloaded COMBINE procedure declaration can be added to this package specification?

- A. PROCEDURE combine;
- B. PROCEDURE combine (p_no NUMBER);
- C. PROCEDURE combine (p_val_1 VARCHAR2, p_val_2 NUMBER);
- D. PROCEDURE concat_all
(p_num_val VARCHAR2, p_char_val NUMBER);

Answer: A

Explanation:

You use the package overloading feature when the same operation is performed using arguments of different types.

Incorrect Answers

- B. This procedure conflicts with the first procedure declaration in that its parameters differs only by name but have the same data type. You cannot use two procedures with the same name if their parameters differ only in name or mode.
- C. This procedure conflicts with the third procedure declaration in that its parameters differs only by name but have the same data type.
- D. This procedure can't be overloaded because it does not use the same name. Package overloading allows more than one procedure or function inside the package to use the same name.

QUESTION 69:

Local procedure A calls remote procedure B. Procedure B was compiled at 8 A.M. Procedure A was modified and recompiled at 9 A.M. Remote procedure B was later modified and recompiled at 11 A.M.

The dependency mode is set to `TIMESTAMP`.

What happens when procedure A is invoked at 1 P.M.?

- A. There is no affect on procedure A and it runs successfully.
- B. Procedure B is invalidated and recompiles when invoked.
- C. Procedure A is invalidated and recompiles for the first time it is invoked.
- D. Procedure A is invalidated and recompiles for the second time it is invoked.

Answer: D

Explanation:

When the local procedure is invoked, at run time the Oracle server compares the two time stamps of the referenced remote procedure. If the time stamps are equal (indicating that the remote procedure has not recompiled), the Oracle server executes the local procedure. If the time stamps are not equal (indicating that the remote procedure has recompiled), the Oracle server invalidates the local procedure and returns a runtime error.

If the local procedure, which is now tagged as invalid, is invoked a second time, the Oracle server recompiles it before executing, in accordance with the automatic local dependency mechanism.

So if a local procedure returns a run-time error the first time that it is invoked, indicating that the remote procedure's time stamp has changed, you should develop a strategy to re-invoke the local procedure.

Incorrect Answers:

A, B, C

QUESTION 70:

Under which two circumstances do you design database triggers? (Choose two)

- A. To duplicate the functionality of other triggers.
- B. To replicate built-in constraints in the Oracle server such as primary key and foreign key.
- C. To guarantee that when a specific operation is performed, related actions are performed.
- D. For centralized, global operations that should be fired for the triggering statement, regardless of which user or application issues the statement.

Answer: C,D

Explanation:

C. When a specific event occurs you can specify that any related code is executed by implementing a Trigger.

D. Triggers allow you have control regardless of which user or which application made the change.

Incorrect Answers

A. You do not want to create a Trigger when a trigger already exists for the specified event.

B. You should not create a Trigger to Trigger to perform functionality that is already built into the Oracle server.

QUESTION 71:

Examine this procedure:

```
CREATE OR REPLACE PROCEDURE DELETE_PLAYER
(V_ID IN NUMBER)
IS
BEGIN
DELETE FROM PLAYER
WHERE ID = V_ID;
EXCEPTION
```

```
WHEN STATS_EXISTS_EXCEPTION  
THEN DBMS_OUTPUT.PUT_LINE  
( 'Cannot delete this player, child records exist in PLAYER_BAT_STAT  
table');  
END;
```

What prevents this procedure from being created successfully?

- A. A comma has been left after the STATS_EXISTS_EXCEPTION exception.
- B. The STATS_EXISTS_EXCEPTION has not been declared as a number.
- C. The STATS_EXISTS_EXCEPTION has not been declared as an exception.
- D. Only predefined exceptions are allowed in the EXCEPTION section.

Answer: C

Explanation:

You can't raise an exception that has not been declared.

Incorrect Answers

- A. This is the correct syntax for raising an exception.
- B. The STATS_EXISTS_EXCEPTION needs to be declared as an exception not as a number.
- C. You have use predefined, Non_predefined and User_Defined Exceptions in the EXCEPTION section

QUESTION 72:

Examine this package:

```
CREATE OR REPLACE PACKAGE manage_emps  
IS  
tax_rate CONSTANT NUMBER(5,2) := .28;  
v_id NUMBER;  
PROCEDURE insert_emp (p_deptno NUMBER, p_sal NUMBER);  
PROCEDURE delete_emp;  
PROCEDURE update_emp;  
FUNCTION calc_tax (p_sal NUMBER)  
RETURN NUMBER;  
END manage_emps;  
/  
CREATE OR REPLACE PACKAGE BODY manage_emps  
IS  
PROCEDURE update_sal  
(p_raise_amt NUMBER)  
IS  
BEGIN
```

```
UPDATE emp
SET sal = (sal * p_raise_emt) + sal
WHERE empno = v_id;
END;
PROCEDURE insert_emp
(p_deptno NUMBER, p_sal NUMBER)
IS
BEGIN
INSERT INTO emp(empno, deptno, sal)
VALYES(v_id, p_deptno, p_sal);
END insert_emp;
PROCEDURE delete_emp
IS
BEGIN
DELETE FROM emp
WHERE empno = v_id;
END delete_emp;
PROCEDURE update_emp
IS
v_sal NUMBER(10, 2);
v_raise NUMBER(10, 2);
BEGIN
SELECT sal
INTO v_sal
FROM emp
WHERE empno = v_id;
IF v_sal < 500 THEN
v_raise := .05;
ELSIF v_sal < 1000 THEN
v_raise := .07;
ELSE
v_raise := .04;
END IF;
update_sal(v_raise);
END update_emp;
FUNCTION calc_tax
(p_sal NUMBER)
RETURN NUMBER
IS
BEGIN
RETURN p_sal * tax_rate;
END calc_tax;
END manage_emps;
/
```

How many public procedures are in the MANAGE_EMPS package?

- A. One
- B. Two
- C. Three
- D. Four
- E. Five

Answer: C

Explanation:

There are three procedure that are declared in the Package Specification and these Procedures are public and can be called from inside and outside of the package.

Incorrect Answers

A, B, D & E. There are three procedures and one function declared in the package specification which are public. There is also one procedure that is only declared in the package body and it is private.

QUESTION 73:

Which command must you issue to allow users to access the UPD_TEAM_STAT trigger on the TEAM table?

- A. GRANT SELECT, INSERT, UPDATE, DELETE ON TEAM TO PUBLIC;
- B. GRANT SELECT, INSERT, UPDATE, DELETE ON UPD_TEAM_STAT TO PUBLIC;
- C. GRANT EXECUTE ON TEAM TO PUBLIC
- D. GRANT SELECT, EXECUTE ON TEAM, UPD_TEAM_STAT TO PUBLIC;

Answer: A

QUESTION 74:

Examine this code:

```
CREATE OR REPLACE PROCEDURE set_bonus
(p_cutoff IN VARCHAR2 DEFAULT 'WEEKLY'
p_employee_id IN employees_employee_id%TYPE
p_salary IN employees_salary%TYPE,
p_bonus_percent IN OUT NUMBER DEFAULT 1.5,
p_margin OUT NUMBER DEFAULT 2,
p_bonus_value OUT NUMBER)
IS
BEGIN
UPDATE emp_bonus
SET bonus_amount =(p_salary * p_bonus_percent)/p_margin
WHERE employee_id = p_employee_id;
```

```
END set_bonus;
```

```
/
```

You execute the CREATE PROCEDURE statement above and notice that it fails.

What are two reasons why it fails? (Choose two)

- A. The syntax of the UPDATE statement is incorrect.
- B. You cannot update a table using a stored procedure.
- C. The format parameter p_bonus_value is declared but is not used anywhere.
- D. The formal parameter p_cutoff cannot have a DEFAULT clause.
- E. The declaration of the format parameter p_margin cannot have a DEFAULT clause.
- F. The declaration of the format parameter p_bonus_percent cannot have a DEFAULT clause.

Answer: E, F

Explanation:

You can't assign a default value for the OUT and IN OUT parameters. Assigning a default value to an OUT or IN OUT parameter causes the following compilation error:
PLS-00230: OUT and IN OUT formal parameters may not have default expressions

Incorrect Answers

- A. There are no syntax errors on the Procedure.
- B. Updates in a Stored Procedure are allowed and are quite common.
- C. This parameter has a default value and the fact that it is not being used in the Procedure will not cause an error.

QUESTION 75:

Which three statements are true regarding database triggers? (Choose three)

- A. A database trigger is a PL/SQL block, C, or Java procedure associated with a table, view, schema, or the database.
- B. A database trigger needs to be executed explicitly whenever a particular event takes place.
- C. A database trigger executes implicitly whenever a particular event takes place.
- D. A database trigger fires whenever a data event (such as DML) or system event (such as logon, shutdown) occurs on a schema or database.
- E. With a schema, triggers fire for each event for all users; with a database, triggers fire for each event for that specific user.

Answer: A, C, D

Explanation:

The trigger body is a PL/SQL block in which you can issue both SQL and PL/SQL statements from the trigger body. You can also call a stored procedure or a Java

procedure from the trigger body. You can also invoke a procedure developed using object-oriented languages, such as C.

C Triggers are invoked implicitly whenever a particular event occurs in the database.

D Database Triggers occur when a Data Event DM, DDL occurs or when system events such as shutting down or starting up the database or a logon or logoff from the database.

Incorrect Answers

B. Database Triggers are invoked implicitly whenever a particular event occurs in the database.

E. Triggers that are created at the database level fire for all the users, and triggers that are created at the schema level fire only when the triggering event involves that schema.

QUESTION 76:

You create a DML trigger. For the timing information, which are valid with a DML trigger?

A. DURING

B. IN PLACE OF

C. ON SHUTDOWN

D. BEFORE

E. ON STATEMENT EXECUTION

Answer: D

Explanation:

Trigger Timing determines whether the trigger will fire BEFORE or AFTER the DML statement on

the table. The BEFORE and AFTER timings are not valid for views. You can only create an

INSTEAD OF trigger on a view.

Incorrect Answers

A, B, C & E are not valid Oracle Events

QUESTION 77:

Which two statements about the overloading feature of packages are true? (Choose two)

A. Only local or packaged subprograms can be overloaded.

B. Overloading allows different functions with the same name that differ only in their return types.

C. Overloading allows different subprograms with the same number, type and order of parameters.

D. Overloading allows different subprograms with the same name and same number or

type of parameters.

E. Overloading allows different subprograms with the same name, but different in either number, type or order of parameters.

Answer: A, E

Explanation:

A Only local or packaged subprograms, or type methods, can be overloaded. You cannot overload standalone subprograms

E The Subprograms within the package must have formal parameters that differ in number, data type, or the order of parameters.

Incorrect Answers

B You cannot overload two functions with the same name that differ only in their return data type.

C & D The Subprograms within the package must have formal parameters that differ in number, data type, or the order of parameters.

QUESTION 78:

All users currently have the INSERT privilege on the PLAYER table.

You only want your users to insert into this table using the ADD_PLAYER procedure. Which two actions must you take?

(Choose two)

- A. GRANT SELECT ON ADD_PLAYER TO PUBLIC;
- B. GRANT EXECUTE ON ADD_PLAYER TO PUBLIC;
- C. GRANT INSERT ON PLAYER TO PUBLIC;
- D. GRANT EXECUTE INSERT ON ADD_PLAYER TO PUBLIC;
- E. REVOKE INSERT ON PLAYER FROM PUBLIC;

Answer: B, E

Explanation:

B. You must provide the users with EXECUTE privilege to the procedure.

E. You want to restrict access to the underlying table so you REVOKE the INSERT privilege to PUBLIC.

Incorrect Answers

A. You can't GRANT the SELECT privilege to a procedure

C. Users already have this privilege, you want to REVOKE this privilege.

D. You can't GRANT an INSERT privilege to a procedure, the EXECUTE privilege is correct.

QUESTION 79:

When creating a function, in which section will you typically find the RETURN keyword?

- A. HEADER only
- B. DECLARATIVE
- C. EXECUTABLE and HEADER
- D. DECLARATIVE,EXECUTABLE and EXCEPTION HANDLING

Answer: C

Explanation:

The header of the function contains the RETURN keyword and identifies the data type that needs to be returned to the calling block. The RETURN statement in the executable section of the function performs the actual returning of the value. The header section defines the return data type of the value and the executable section does the actual returning.

Incorrect Answers

- A. You need a RETURN Statement in the EXECUTABLE section as well.
- B. You will not find a RETURN in the declaration section.
- D. You will not find a RETURN statement in either section..

QUESTION 80:

A dependent procedure or function directly or indirectly references one or more of which four objects? (Choose four)

- A. view
- B. sequence
- C. privilege
- D. procedure
- E. anonymous block
- F. packaged procedure or function

Answer: A, B, D, F

Explanation:

Procedure and function can either directly or indirectly refer to the following objects.Tables,Views,Sequences,Procedures,Functions, Packaged procedures and functions

Incorrect Answers

- C. Procedures and functions can't refer to a privilege.
- E. An anonymous block is not a stored program unit therefore it can't be referred to.

QUESTION 81:

Which three are true regarding error propagation? (Choose three)

- A. An exception cannot propagate across remote procedure calls.
- B. An exception raised inside a declaration immediately propagates to the current block.
- C. The use of the RAISE; statement in an exception handler reprises the current exception.
- D. An exception raised inside an exception handler immediately propagates to the enclosing block.

Answer: A, C, D

Explanation:

A. Exceptions cannot propagate across remote procedure calls (RPCs). Therefore, a PL/SQL block cannot catch an exception raised by a remote subprogram. For a workaround, see "Defining Your Own Error Messages: Procedure RAISE_APPLICATION_ERROR".

C. To reraise an exception you place a RAISE statement in the local exception handler.

D. When an exception is raised, the control is passed to the exception-handling section. The control is never transferred back to the executable section after the exception is handled rather it propagates to the enclosing block.

Incorrect Answer

B. As a rule of thumb, exceptions are declared in the declarative section, raised in the executable section, and handled in the exception-handling section. When an exception is raised, the control is passed to the exception-handling section

QUESTION 82:

Which two tables or views track object dependencies? (Choose two)

- A. USER_DEPENDENCIES
- B. USER_IDEPTREE
- C. IDEPTREE
- D. USER_DEPTREE
- E. USER_DEPENDS

Answer: A, C

Explanation:

A. The data dictionary view USER_DEPENDENCIES displays information about all direct dependencies within your schema.

C. The IDEPTREE View displays indirect dependencies in an indented format.

Incorrect Answers

B, D & E. These are not valid Oracle Views

QUESTION 83:

Examine the trigger heading:

```
CREATE OR REPLACE TRIGGER salary_check  
BEFORE UPDATE OF sal, job ON emp  
FOR EACH ROW
```

Under which condition does this trigger fire?

A. When a row is inserted into the EMP table.

B. When the value of the SAL or JOB column in a row is updated in the EMP table.

C. When any column other than the SAL and JOB columns in a row are updated in the EMP table.

D. Only when both values of the SAL and JOB columns in a row are updated together in the EMP table.

Answer: B

Explanation:

The triggering event is based on an UPDATE of the SAL or the JOB column in the EMP Table.

Incorrect Answers

A. The triggering event is not an INSERT into the table.

C. The Trigger is defined to fire when either the SAL or JOB columns are updated. The trigger will not fire if any of the other columns in the table are updated.

D. The Trigger fires based on an Update of the SAL OR JOB Column . This is not an AND Operator.

QUESTION 84:

You have an AFTER UPDATE row-level on the table EMP. The trigger queries the EMP table and inserts the updating user's information into the AUDIT_TABLE.

What happens when the user updates rows on the EMP table?

A. A compile time error occurs.

- B. A runtime error occurs. The effect of trigger body and the triggering statement are rolled back.
- C. A runtime error occurs. The effect of trigger body is rolled back, but the update on the EMP table takes place.
- D. The trigger fires successfully. The update on the EMP table occurs, and data is inserted into the AUDIT_TABLE table.
- E. A runtime error occurs. The update on the EMP table does not take place, but the insert into the AUDIT_TABLE occurs.

Answer: B

Explanation:

This results in a mutating table. A mutating table is a table against which a data manipulation statement has a corresponding trigger on the DML statement is reading from the same table. When a trigger encounters a mutating table, a runtime error occurs, the effects of the trigger body and triggering statement are rolled back, and control is returned to the user or application.

Incorrect Answers

- A. This trigger will be created without any compilation errors. The error will not occur until runtime.
- C. The effects of the trigger body and triggering statement are rolled back
- D A runtime error occurs and both are rolled back
- E A runtime error occurs and both are rolled back

QUESTION 85:

The add_player, upd_player_stat, and upd_pitcher_stat procedures are grouped together in a package. A variable must be shared among only these procedures. Where should you declare this variable?

- A. In the package body.
- B. In a database trigger.
- C. In the package specification.
- D. In each procedure's DECLARE section, using the exact same name in each.

Answer: A

Explanation:

A You want to declare this variable in the package body before the procedures so that it may be shared among all of the procedure. If it was declared in the package specification it would be accessible outside of the package.

Incorrect Answers

- B. If you declared it inside a trigger it could only be used by the trigger in which it was

defined.

C. Declaring the variable in the package specification would make this variable public.

D. The variable would be local to each procedure and this would prevent the variable from being shared.

QUESTION 86:

Examine this package:

```
CREATE OR REPLACE PACKAGE pack_cur
IS
  CURSOR c1 IS
    SELECT prodid
    FROM product
    ORDER BY Prodid DESC;
  PROCEDURE Proc1;
  PROCEDURE Proc2;
END pack_cur;
/
CREATE OR REPLACE PACKAGE BODY pack_cur
IS
  v_prodif NUMBER;
  PROCEDURE proc1 IS
  BEGIN
    OPEN C1;
    LOOP
      FETCH c1 INTO V_prodid;
      DBMS_OUTPUT.PUT_LINE('Row is :||C1% ROWCOUNT);
      EXIT WHEN C1% ROWCOUNT>=3;
    END LOOP;
  END PROC1;
  PROCEDURE proc2 IS
  BEGIN
    LOOP
      FETCH C1 INTO v_prodid;
      DBMS_OUTPUT-PUT_LINE ( ' Row is: ' || c1 %ROWCOUNT);
      EXIT WHEN C1%ROWCOUNT >= 3;
    END LOOP;
  END Proc1;
/
```

The product table has more than 1000 rows. The SQL*Plus SERVEROUTPUT setting is turned on in your session.

You execute the procedure PROC1 from SQL *Plus with the command:

```
EXECUTE pack_cur. PROC1;
```

You then execute the procedure PROC2 from SQL *Plus with the command:

EXECUTE pack_cur. PROC2;

What is the output in your session from the PROC2 procedure?

A. ERROR at line 1:

B. Row is:

Row is:

Rows is:

C. Row is: 1

Row is: 2

Row is: 3

D. Row is: 4

Row is: 5

Row is: 6

Answer: D

Explanation:

In the above example, the first procedure is used to fetch the first three rows, and the second procedure is used to fetch the next three rows from the product table. cursors declared in the package specification are persistent and retain their status across the user session. The persistent state of the cursor refers to the rule that you can open a cursor in one block, fetch the rows in another block, and close the cursor in yet another block.

Incorrect Answers

A. This would execute successfully and would not generate an error.

B. The DBMS_OUTPUT.PUT_LINE will include the value of the ROWCOUNT of the cursor.

C. The ROWCOUNT is 3 when PROC1 finishes executing. Since the cursor state is persistent when the PCOC2 procedure executes the next row fetched on ROW 4. The LOOP exits when after it fetches the 6th Row.

QUESTION 87:

You disabled all triggers on the EMPLOYEES table to perform a data load. Now, you need to enable all triggers on the EMPLOYEES table. Which command accomplished this?

A. You cannot enable multiple triggers on a table in one command.

B. ALTER TRIGGERS ON TABLE employees ENABLE;

C. ALTER employees ENABLE ALL TRIGGERS;

D. ALTER TABLE employees ENABLE ALL TRIGGERS;

Answer: D

Explanation:

To enable or disable a single Trigger you issue the following Command at the Trigger Level:

```
ALTER TRIGGER TriggerName  
ENABLE|DISABLE TriggerName;
```

QUESTION 88:

When creating stored procedures and functions, which construct allows you to transfer values to and from the calling environment?

- A. local variables
- B. arguments
- C. Boolean variables
- D. Substitution variables

Answer: B

Explanation:

Arguments declared in the parameter list of the subprogram are called formal parameters. The MODE determines whether the values can be transferred to the calling environment OUT & IN OUT or from the calling Environment IN & IN OUT.

Incorrect Answers

A, C & D These variables can't be used to transfer values to & from the calling environment.

QUESTION 89:

You have the following table:

```
CREATE TABLE Emp_log (  
Emp_id NUMBER  
Log_date DATE,  
New_salary NUMBER,  
Action VARCHAR (20));
```

You have the following data in the EMPLOYEES table:

```
EMPLOYEE_ID LAST_NAME SALARY DEPARTMENT_ID
```

```
-----  
100 Bill 24000 90  
101 Kochhar 17000 90  
102 De Haan 17000 90  
103 Hunold 9000 60  
104 Ernst 6000 60  
105 Austin 4800 60  
106 Pataballa 4800 60  
107 Lorentz 4200 60
```

108 Greenberg 12000 100
201 Hartstein 13000 20
202 Fay 6000 20

You create this trigger:

```
CREATE OR REPLACE TRIGGER Log_salary_increase
AFTER UPDATE ON employees
FOR EACH ROW
WHEN (new.Salary > 1000)
BEGIN
INSERT INTO Emp_log (Emp_id, Log_date, New_Salary, Action)
VALUES (:new.Employee_id, SYSDATE, :new.SALary, 'NEW
SAL');
END
/
```

Then, you enter the following SQL statement:

```
UPDATE Employee SET Salary = Salary + 1000.0
Where Department_id = 20M
```

What are the result in the EMP_LOG table?

A

```
EMP_ID LOG_DATE NEW_SALARY ACTION
-----
```

```
201 24-SEP-02 13000 NEW SAL
202 24-SEP-02 600 NEW SAL
```

B.

```
EMP_ID LOG_DATE NEW_SALARY ACTION
-----
```

```
201 24-SEP-02 14000 NEW SAL
202 24-SEP-02 7000 NEW SAL
```

C.

```
EMP_ID LOG_DATE NEW_SALARY ACTION
-----
```

```
201 24-SEP-02 NEW SAL
202 24-SEP-02 NEW SAL
```

D. No rows are inserted.

Answer: B

Explanation:

Employees with a Department Code = 20 are updated in the SQL Statement and 1000 is added to there existing salary.

Employee Hartstein has a salary of 1300 and Employee Fay has a salary of 6000 before the update.

The Trigger inserts a record for each row into the Emp_log table. The trigger specifies to insert the new value

of the salary therefore the Salary values inserted will be 14000 for Hartstein & 700 for Fay.

Answer A is incorrect the Trigger specifies to insert the new values. If the Trigger specified the: old.salary this would be correct

Answer C omits the value of the: new.Salary

Answer D is wrong. This trigger will fire and since it is a row-level trigger, it will insert a record into the Emp_log table for each record updated.

QUESTION 90:

Which code successfully calculates tax?

A. CREATE OR REPLACE PROCEDURE calctax (p_no IN NUMBER)

RETURN tax IS

v_sal NUMBER;

tax NUMBER;

BEGIN

SELECT sal INTO v_sal

FROM emp

WHERE empno = p_no;

tax := v_sal * 0.05;

END;

B. CREATE OR REPLACE FUNCTION calctax (p_no NUMBER)

RETURN NUMBER IS

v_sal NUMBER

BEGIN

SELECT sal INTO v_sal

FROM emp

WHERE empno = p_no;

RETURN:= v_sal * 0.05;

end

C. CREATE OR REPLACE FUNCTION calctax (p_no NUMBER)

RETURN NUMBER IS

v_sal NUMBER;

tax NUMBER;

BEGIN

SELECT sal INTO v_sal

FROM emp

WHERE empno = p_no;

tax := v_sal * 0.05;

END

D. CREATE OR REPLACE FUNCTION calctax (p_no NUMBER) IS

v_sal NUMBER;

tax NUMBER;

BEGIN

SELECT sal INTO v_sal

FROM emp

```
WHERE empno = p_no;  
tax := v_sal * 0.05;  
return (tax);  
END;
```

Answer: B

Explanation:

Incorrect Answers

- A. A RETURN clause is only valid in a function
- C. Missing a RETURN clause in the executable section
- D. The header portion of the function is missing the RETURN keyword.

QUESTION 91:

Examine this code:

```
CREATE OR REPLACE FUNCTION gen_email_name  
(p_first VARCHAR2, p_last VARCHAR2)  
RETURN VARCHAR2  
IS  
v_email_name VARCHAR (19) ;  
BEGIN  
v_email_bame := SUBSTR(p_first, 1, 1) ||  
SUBSRE(p_last, 1, 7) ||  
RETURN v_email_name;  
END  
/
```

Which two statements are true?

- A. This function is invalid.
- B. This function can be used against any table.
- C. This function cannot be used in a SELECT statement.
- D. This function can be used only if the two parameters passed in are not null values.
- E. This function will generate a string based on 2 character values passed into the function.
- F. This function can be used only on tables where there is a p_first and p_last column.

Answer: D, E

Explanation:

Answer D is a correct response. If any of the parameters passed in are null then the result will be null and the function will attempt to return a NULL value.

Answer E This function concatenates the first character of the first name and the first

seven characters
of the last name which are passed in as parameters

QUESTION 92:

Examine the code examples. Which one is correct?

- A. CREATE OR REPLACE TRIGGER authorize_action
BEFORE INSERT ON EMPLOYEES
CALL log_execution;
/
- B. CREATE OR REPLACE TRIGGER authorize_action
BEFORE EMPLOYEES INSERT
CALL log_execution;
- C. CREATE OR REPLACE TRIGGER authorize_action
BEFORE EMPLOYEES INSERT
CALL log_execution;
- D. CREATE OR REPLACE TRIGGER authorize_action
CALL log_execution; BEFORE INSERT ON EMPLOYEES;
/

Answer: A

Explanation:

Answer A is the correct syntax for creating a Trigger and calling a procedure

Incorrect answers:

Answer B is incorrect. This is incorrect syntax for creating a Trigger

Answers C and D are incorrect syntax and will result in an error

QUESTION 93:

You need to create a DML trigger. Which five pieces need to be identified? (Choose five)

- A. Table
- B. DML event
- C. Trigger body
- D. Package body
- E. Package name
- F. Trigger name
- G. System event
- H. Trigger timing

Answer: A, B, C, F, H

Explanation:

Incorrect answers:

- D. A Package body is not part of a trigger. You may call procedure which can be written in PL/SQL, JAVA or C that is part of a package but this is not required.
- E. Package Name. A package is not part of the trigger definition
- G. System Event is not associated with a DML Trigger

QUESTION 94:

Procedure PROCESS_EMP references the table EMP.

Procedure UPDATE_EMP updates rows if table EMP through procedure PROCESS_EMP.

There is a remote procedure QUERY_EMP that queries the EMP table through the local procedure PROCESS_EMP.

The dependency mode is set to TIMESTAMP in this session.

Which two statements are true? (Choose two)

- A. If the signature of procedure PROCESS_EMP is modified and successfully recompiles, the EMP table is invalidated.
- B. If internal logic of procedure PROCESS_EMP is modified and successfully recompiles, UPDATE_EMP gets invalidated and will recompile when invoked for the first time.
- C. If the signature of procedure PROCESS_EMP is modified and successfully recompiles, UPDATE_EMP gets invalidated and will recompile when invoked for the first time.
- D. If internal logic of procedure PROCESS_EMP is modified and successfully recompiles, QUERY_EMP gets invalidated and will recompile when invoked for the first time.
- E. If internal logic of procedure PROCESS_EMP is modified and successfully recompiles, QUERY_EMP gets invalidated and will recompile when invoked for the second time.

Answer: B, E

Explanation:

B. The UPDATE_EMP references the local Procedure PROCESS_EMP. Local Dependent objects are immediately set to invalid whenever the referenced object is changed. The Oracle server will recompile the dependent object upon execution.

E. Since QUERY_EMP is a remote procedure, this procedure will be set to invalid the first time that it executes and it will recompile the second time that it is invoked

Incorrect Answers

A. We are using Timestamp checking not signature checking. The EMP Table is the referenced object. If the definition of a referenced object is changed or modified, its

dependent objects become invalid. Modifying any of the dependent procedures (Emp Table in this case) will not invalidate the referenced object regardless of the mode to check dependencies.

C. In this scenario we are using TimeStamp method not the Signature method.

D. Since QUERY_EMP is a remote procedure, this procedure will be set to invalid the first time that it executes and it will recompile the second time that it is invoked.

QUESTION 95:

Examine this package:

```
CREATE OR REPLACE PACKAGE pack_cur
IS
  CURSOR c1 IS
  SELECT prodid
  FROM product
  ORDER BY prodid DESC;
  PROCEDURE proc1;
  PROCEDURE proc2;
END pack_cur;
/
CREATE OR REPLACE PACKAGE BODY pack_cur
IS
  v_prodid NUMBER;
  PROCEDURE proc1 IS
  BEGIN
  OPEN C1
  LOOP
  FETCH C1 INTO v_prodid;
  DBMS_OUTPUT.PUT_LINE ( 'Row is: ' || c1%ROWCOUNT);
  EXIT WHEN c1%ROWCONT >= 3;
  END LOOP;
  END proc1;
  PROCEDURE proc2 IS
  BEGIN
  LOOP
  FETCH C1 INTO v_prodid;
  DBMS_OUTPUT.PUT_LINE ( 'Row is: ' || c1%ROWCOUNT);
  EXIT WHEN c1%ROWCONT >= 6;
  END LOOP;
  CLOSE C1;
  END proc2;
END pack_cur;
/
```

The product table has more than 1000 rows. The SQL *Plus SERVEROUTPUT setting is turned on in your session.

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You execute the procedure PROC1 from SQL *Plus with the command:
EXECUTE pack_cur.proc1
What is the output in your session?

- A. ERROR at line 1:
B. Row is:
Row is:
Row is:
- C. Row is: 1
Row is: 2
Row is: 3
- D. Row is: 4
Row is: 5
Row is: 6

Answer: C

Explanation:

proc1 will open the C1 Cursor and go into a Loop. The Loop Fetches and outputs the first three records. Since the SET SERVEROUTPUT Command was set the results will be displayed

Incorrect Answers

- A. This procedure will successfully execute with errors.
- B. The output will include the Row Number fetched from the cursor.
- D. This would be the output if you executed the proc1 cursor fro the second time.

QUESTION 96:

The add_player procedure inserts rows into the PLAYER table.
Which command will show this directory dependency?

- A. SELECT * FROM USER_DEPENDENCIES
WHERE REFERENCED_NAME = ' PLAYER ' ;
- B. SELECT * FROM USER_DEPENDENCIES
WHERE REFERENCED_NAME = ' ADD PLAYER ' ;
- C. SELECT * FROM USER_DEPENDENCIES
WHERE TYPE = 'DIR' ;
- D. SELECT * FROM USER_DEPENDENCIES
WHERE REFERENCED_NAME = ' TABLE ' ;

Answer: A

Explanation:

The REFERENCED_NAME Column displays the name of the referenced object. If you

specify Player in the Referenced name column all objects that reference the PLAYER Table(Direct Dependencies) will be displayed.

Incorrect Answers

- B. This would show all dependencies on the add_player, not the PLAYER Table.
- C. This would not display anything. The TYPE Column list the dependent object's type (procedure, function, package, package body, trigger, or view).
- D. This would not display anything. If you wanted all dependencies for OBJECTS of TYPE TABLE you would filter on the TYPE Column.

QUESTION 97:

When using a packaged function in a query, what is true?

- A. The COMMIT and ROLLBACK commands are allowed in the packaged function.
- B. You can not use packaged functions in a query statement.
- C. The packaged function cannot execute an INSERT, UPDATE, or DELETE statement against the table that is being queried.
- D. The packaged function can execute an INSERT, UPDATE, or DELETE statement against the table that is being queried if it is used in a subquery.
- E. The packaged function can execute an INSERT, UPDATE or DELETE statement against the table that is being queried if the pragma RESTRICT REFERENCE is used.

Answer: C

Explanation:

A function, stand-alone or package can't execute DML (INSERT, UPDATE & DELETE) against the table that is being queried. This will result in a mutating table and generate a runtime error.

Incorrect Answers

- A. The function must not end the current transaction with COMMIT or ROLLBACK, or ROLLBACK to a savepoint prior to the function execution.
- B. You can use packaged functions in query statements provided they do not violate certain restrictions.
- D. This results in a mutating table and will generate a runtime error.
- E. The PRAGMA RESTRICT_REFERENCES is a compiler directive compiler as to what a function can and cannot do. This compiler processing so that the function conforms to its purity level. This will not prevent the problem of a mutating table.

QUESTION 98:

You have a table with the following definition:

```
CREATE TABLE long_tab  
( id NUMBER)  
long_col LONG)
```

You need to convert the LONG_COL column from a LONG data type to a LOB data type. Which statement accomplish this task?

- A. ALTER TABLE long_tab
MODIFY (LONG_COL CLOB);
- B. EXECUTE dbms_lob.migrate(long_tab, long_col, clob)
- C. EXECUTE dbms_manage_lob.migrate(long_tab, long_col, clob)
- D. EXECUTE utl_lob.migrate(long_tab, long_col, clob)
- E. EXECUTE utl_manage_lob.migrate(long_tab, long_col, clob)

Answer: A

Explanation:

In Oracle 9i, a LONG column in a Table can be migrated to a LOB column using the ALTER TABLE statement. The syntax is:

```
ALTER TABLE <schema>.<table name> <BR>  
MODIFY <long column name> { CLOB | BLOB | NCLOB }
```

In Oracle 8i you must use the TO_LOB function to migrate an existing LONG column to a LOB column.

This function can only be used in the SELECT list of a subquery in an INSERT Statement.

QUESTION 99:

Why do you use an INSTEAD OF trigger?

- A. To perform clean up actions when ending a user session.
- B. To insert data into a view that normally does not accept inserts.
- C. To insert into an audit table when data is updated in a sensitive column.
- D. To modify data in which the DML statement has been issued against an inherently non-updateable view.

Answer: D

Explanation:

An INSTEAD OF trigger is used to perform a DML activity on the underlying tables of a view that is inherently non-updatable.

Incorrect Answers

- A. This could be performed by a System Event Trigger (BEFORE LOGOFF) not by an INSTEAD OF Trigger.
- B. You can't insert data into a view, however, you can insert data into the underlying

table that the view is based on.

C. This would not require an INSTEAD of Trigger, rather you would specify BEFORE UPDATE OF ColumnName ON TableName.

QUESTION 100:

When using a PL/SQL stored package, how is a side effect defined?

- A. changes only to database tables
- B. changes only to packaged public variables defined in a package body
- C. changes only to packaged public variables defined in a package specification
- D. changes to database tables or packaged public variables defined in a package body
- E. changes to database tables or packaged variables defined in a package specification

Answer: E

Explanation:

Side effects are defined as changes to the database tables or the public packaged variables.

Incorrect Answers

- A. Side effects are not limited to changes to the database tables. They also include changes to public packaged variables.
 - B. Variables defined in the package body are not public.
 - C. This option excludes changes to database tables.
 - D. Database Tables and Public variables are not defined in a package body.
-

QUESTION 101:

Examine this package

```
CREATE OR REPLACE PACKAGE discounts
```

```
IS
```

```
g_id NUMBER:=7839
```

```
discount_rate NUMBER:=0.00;
```

```
PROCEDURE display_price(p_price NUMBER);
```

```
END discount;
```

```
/
```

```
CREATE OR REPLACE PACKAGE BODY discounts
```

```
IS
```

```
PROCEDURE display_price (p_price NUMBER)
```

```
IS
```

```
BEGIN
```

```
DBMS_OUTPUT.PUT LINE ( 'Discounted '||
```

```
TO_CHAR(p_price*NVL(discount_rate,1)));
```

```
END discount;  
BEGIN  
Discount_rate=0.10;  
END discounts;  
/
```

The SQL*Plus SERVEROUTPUT setting is turned on in your session. You execute the procedure DISPLAY_PRICE from SQL*Plus with the command EXECUTE discount.display_price(100);
What is the result?

- A. Discounted 10
- B. Discounted 100
- C. Discounted 0.00
- D. Discounted NULL
- E. Discounted 0.10

Answer: A

Explanation:

The discounts package contains a one-time-only procedure which is executed when the package is first referenced and sets the public variable discount_rate = .10. The value of 100 is passed to the p_price parameter and this is multiplied by the discount_rate resulting in a value of 'Discounted 10' is displayed by the DBMS_OUTPUT.PUT_LINE.

Incorrect Answers

B, C, D & E are incorrect

QUESTION 102:

Which two statements about functions are true? (Choose two.)

- A. A function must have a return statement in its body to execute successfully
- B. Client-side functions can be used in SQL statements
- C. A stored function that is called from a SQL statement can return a value of any PL/SOL variable data type
- D. From SQL*Plus, a function can be executed by giving the command EXECUTE functionname;
- E. A stored function increases efficiency of queries by performing functions on the server rather than in the application

Answer: A, E

Explanation:

There should be a RETURN statement in the function body. If the RETURN statement in the executable section is omitted, the function will successfully compile but the

following error will be generated at run time:

ORA-06503: PL/SQL: Function returned without value

This is because the function does not return any value to the calling block.

E. User-defined functions increase the efficiency of queries by applying the functions in the query

itself. This improves performance because the data will be filtered on the server as opposed to the client which will reduce network traffic.

Incorrect Answers

B. Functions must be stored on the server to be used in a SQL Statement.

C. Functions called from SQL expressions should return the data type that is compatible with SQL. PL\SQL Data Types such as BOOLEAN, RECORD, or TABLE data types are not supported by SQL.

D. Functions are not called like procedures. You cannot use EXECUTE to invoke a function unless you have a variable to hold the returning value.

QUESTION 103:

Examine this code

```
CREATE OR REPLACE PROCEDURE load_bfile (p_file_loc IN VARCHAR2)
```

```
IS
```

```
V_file BFILE;
```

```
v_filename VARCHAR2(16);
```

```
CURSOR emp_cursor IS
```

```
SELECT employee_id
```

```
FROM employees
```

```
WHERE Job_id = 'IT_PROG'
```

```
FROM UPDATE
```

```
BEGIN
```

```
FOR emp_record IN emp_cursor LOOP
```

```
v_filename:=emp_record.employee_id||'.GIF';
```

```
V_file:=BFILENAME(p_file_loc,v_filename);
```

```
END LOOP;
```

```
END;
```

```
/
```

What does the BFILENAME function do?

A. It reads data from an external BFILE

B. It checks for the existence of an external BFILE

C. It returns a BFILE locator that is associated with a physical LOB binary file on the server's file system

D. It creates a directory object for use with the external BFILES

Answer: C

Explanation:

In Oracle/PLSQL, the BFILENAME function returns a BFILE locator for a physical LOB binary file.

Incorrect Answers

- A. DBMS_LOB.READ Procedure reads data from a BFILE.
- B. DBMS_LOB.FILEEXISTS functions checks for the existence of the file on the Server.
- D. You do not use the BFILENAME function to create a directory object. The syntax to create the directory object is:
CREATE DIRECTORY<directory name> AS <operating system path>

QUESTION 104:

Consider this scenario

A procedure X references a view Y that is based on a table Z .

Which two statements are true? (Choose two.)

- A. Y is a referenced object
- B. Z is a direct dependent of X
- C. Y is a direct dependent of X
- D. Y is an indirect dependent of X
- E. Y is an indirect dependent of Z
- F. Z is an indirect dependent of Y

Answer: A, C

Explanation:

- A. Y is referenced by X.
- C. There is a direct dependency between Z and X.

Incorrect Answers

- B. X is an indirect dependent of X
- D. Y is a Direct dependent of X.
- E. Y is a direct dependent of Z.
- F. Z is a direct dependent of Y.

QUESTION 105:

Examine this code

```
CREATE OR REPLACE FUNCTION change_dept  
(p_old_id NUMBER, p_deptname VARCHAR2)  
RETURN NUMBER  
IS  
v_new_id NUMBER
```



```
BEGIN
SELECT departments_seq.nextval
INTO v_new_id
FROM dual;
UPDATE departments
SET department_id = v_new_id,
    Department_name = p_deptname
WHERE department_id=p_old_id;
Return v_new_id;
End;
/
```

There are no foreign key integrity constraints on the EMPLOYEES and DEPARTMENTS tables.

Which statement performs a successful update to the EMPLOYEES table?

- A. UPDATE departments
SET department_id = change_dept(10, 'Finance')
Where department_id=10;
- B. UPDATE employees
SET department_id = change_dept(10, 'Finance')
Where department_id=10;
- C. UPDATE departments
change_dept(270, 'Outsource')
Where department_name='payroll';
- D. UPDATE employees
SET department_id = change_dept(10, 'Finance')
WHERE department_id = DEPARTMENTS:CURRVAL;

Answer: B

Explanation:

This statement updates the Department_id of the Employees with department_id 10 to the next sequence number. The Update Statement invokes the change_dept function in the set statement and passes the Current department_id & the New Department Name as input parameters. The Function gets the next Department ID from the Sequence and successfully updates the Department & Department Name based on the parameters passed to the function.

Incorrect Answers

- A. This statement will not update the Employees Table. The Statement would attempt to update the Departments table will it would generate an error due to a mutating table.
- C. This Statement attempts to update the wrong table, has incorrect syntax and if corrected would result in an error due to a mutating table.
- D. This is not a valid sequence. You can't have a sequence with the same name as a table and if you tried to use the CURRVAL of the departments_seq.nextval sequence in the WHERE you would get the following error:

QUESTION 106:

Which two statements about object dependencies are accurate? (Choose two.)

- A. When referencing a package procedure or function from a stand-alone procedure or function, if the package specification changes, the package body remains valid but the stand-alone procedure becomes invalid
- B. When referencing a package procedure or function from a stand-alone procedure or function, if the package body changes and the package specification does not change, the stand-alone procedure referencing a package construct remains valid.
- C. When referencing a package procedure or function from a stand-alone procedure or function, if the package body changes and the package specification does not change, the stand-alone procedure referencing a package construct becomes invalid
- D. When referencing a package procedure or function from a stand-alone procedure or function, If the package specification changes, the stand-alone procedure referencing a package construct as well as the package body become invalid

Answer: B, D

Explanation:

B. One of the advantages with packages is the improved handling of dependencies. The package structure separates the program unit code (body) from the program unit header (specification). If modifications are made to the code in the package body and the package specification remains unchanged, the status of dependent objects are not changed to INVALID, as is the case with stand-alone program units.

D. If you change the package specification any objects including stand-alone procedures or functions that reference the package are invalidated. When you change the Package specification the status of the package body is set to invalid.

Incorrect Answers

A. When you change the package specification the package body becomes invalid and the stand-alone procedures become invalid.

C. If modifications are made to the code in the package body and the package specification remains unchanged, the status of dependent objects are not changed to INVALID.

QUESTION 107:

You need to create a trigger to ensure that information in the EMP table is only modified during business hours, Monday to Friday from 9:00am to 500pm
Which types of trigger do you create? (Choose two.)

- A. row level AFTER INSERT OR UPDATE OR DELETE ON EMP

- B. row level BEFORE INSERT OR UPDATE OR DELETE ON EMP
- C. statement level AFTER INSERT OR UPDATE OR DELETE ON EMP
- D. statement level BEFORE INSERT OR UPDATE OR DELETE ON EMP

Answer: B, D

Explanation:

B. You would want to create a trigger that fires BEFORE the DML Statement. A row level BEFORE INSERT OR UPDATE OR DELETE ON EMP trigger would satisfy the requirement.

D. A statement level BEFORE INSERT OR UPDATE OR DELETE ON EMP trigger would satisfy the requirement.

Incorrect Answers

A & C. If you create a trigger that fires AFTER the DML statement then you would not be able to prevent the EMP table from being modified outside business hours.

QUESTION 108:

Examine this package:

```
CREATE OR REPLACE PACKAGE BB_PACK
IS
  V_MAX_TEM_SALARY NUMBER(12,2);
  PROCEDURE ADD_PLAYER (V_ID IN NUMBER, V_LAST_NAME
  VARCHAR2, V_SALARY NUMBER);
END BB_PACK;
/
CREATE OR REPLACE PACKAGE BODY BB_PACK
IS
  V_PLAYER_AVG NUMBER(84,3);
  PROCEDURE UPD_PLAYER_STAT
  (V_ID IN NUMBER, V_AB IN NUMBER DEFAULT 4, V_HITS IN NUMBER)
  IS
  BEGIN
  UPDATE PLAYER_BAT_STAT
  SET AT_BATS = AT_BATS + V_AB,
  HITS = HITS + V_HITS
  WHERE PLAYER_ID=V_ID;
  COMMIT;
  VALIDATE_PLAYER_STAT(V_ID);
  END UPD_PLAYER_STAT;
  PROCEDURE ADD_PLAYER
  (V_ID IN NUMBER, V_LAST_NAME VARCHAR2, V_SALARY NUMBER)
  IS
  BEGIN
  INSERT INTO PLAYER (ID, LAST_NAME, SALARY)
```

```
VALUES(V_ID,V_LAST_NAME,V_SALARY);  
UPD_PLAYER_STAT(V_ID,0,0);  
END ADD_PLAYER;  
END BB_PACK;
```

If you add an IF statement to the ADD_PLAYER procedure which additional step must you perform?

r A Recompile the ADD PLAYER procedure
Recompile both the BB PACK specification and body

- A. Recompile the ADD_PLAYER procedure
- B. Recompile both the BB_PACK specification and body
- C. Recompile the BB_PACK specification
- D. Recompile the BB_PACK body

Answer: D

Explanation:

The only correct option is to ALTER the package body which will cause the package body to recompile.

Incorrect Answers

- A. This procedure is part of the f the BB_PACK Body and it can't be compiled separately.
- B. The package specification is not referenced by the package body, therefore it is not necessary to recompile the package specification. Only the package body requires recompiling.
- C. It is not necessary to recompile the package specification because it is not referenced by the package body

QUESTION 109:

Which statement is true about removing packages?

- A. You must remove the package body first
- B. Removing a package specification removes the body too
- C. Removing the package body removes the specification too
- D. You must remove both the package body and the specification separately
- E. Removing a package specification removes all stand alone stored functions named in the specification

Answer: B

Explanation:

Answer D is incorrect

To remove the package specification and the package body you use the

command:

DROP PACKAGE <Package_Name>

To remove the package body from the database, you use the following

command:

DROP PACKAGE BODY <Package_Name>

Answer B is the correct response - Removing a package specification removes the body too.

QUESTION 110:

Which two statements are true about LOBs? (Choose two.)

- A. BFILES are stored in the database
- B. All LOBs have read and write access
- C. NCLOB represents a multi-byte character object
- D. The Oracle9i server performs implicit conversions between BLOBs and NUMBER data types
- E. The Oracle9i server performs implicit conversions between CLOBs and VARCHAR2 data types

Answer: C, E

Explanation:

- A. The BFILE data type is an external LOB. External LOBs are stored outside the database in operating system files.
- B. BFILES are read-only, and they cannot participate in transactions that occur within the database.
- D. You can perform Implicit conversions between LONG and CLOB columns and RAW and BLOB columns but you can't implicitly convert between BLOBs and NUMBER.

QUESTION 111:

You want to create procedures, functions and packages Which privilege do you need?

- A. EXECUTE CODE object privilege
- B. CREATE ANY CODE object privilege
- C. CREATE PACKAGE system privilege
- D. CREATE PROCEDURE system privilege
- E. CREATE FUNCTION, CREATE PROCEDURE, CREATE PACKAGE system privileges

Answer: D

Explanation:

The privilege CREATE PROCEDURE gives the grantee the right to create procedures, functions, and packages within their schema. This privilege does not give the right to drop or alter the program constructs.

Incorrect Answers

A, B & C are not valid object or system privileges.