

# EXAMGOOD

## QUESTION & ANSWER

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**Exam : A2090-545**

**Title : Assessment: DB2 9.7 SQL  
Procedure Developer  
Assessment**

**Version : DEMO**

1.A developer needs to create a user-defined function that will return a list of employees who work in a particular department. Which statement will successfully create a function that meets this objective?

- A. CREATE FUNCTIONdept\_employees (deptno CHAR(3)) RETURNS TABLE LANGUAGE SQL  
READS SQL DATA RETURN SELECT empno, lastname AS l\_name, firstnme AS f\_name FROM  
employee WHERE employee.workdept = dept\_employees.deptno
- B. CREATE FUNCTIONdept\_employees (deptno CHAR(3)) RETURNS TABLE DYNAMIC RESULT  
SETS 1 LANGUAGE SQL READS SQL DATA DECLARE emp\_info CURSOR WITH RETURN FOR  
SELECT empno, lastname AS l\_name, firstnme AS f\_name FROM employee WHERE  
employee.workdept = dept\_employees.deptno OPEN emp\_info; RETURN
- C. CREATE FUNCTIONdept\_employees (deptno CHAR(3)) RETURNS TABLE (empno CHAR(6),  
l\_nameVARCHAR(15), f\_nameVARCHAR(12)) LANGUAGE SQL READS SQL DATA RETURN SELECT  
empno, lastname AS l\_name, firstnme AS f\_name FROM employee WHERE employee.workdept =  
dept\_employees.deptno
- D. CREATE FUNCTIONdept\_employees (deptno CHAR(3)) RETURNS TABLE (empno CHAR(6),  
l\_nameVARCHAR(15), f\_nameVARCHAR(12)) DYNAMIC RESULT SETS 1 LANGUAGE SQL READS  
SQL DATA DECLARE emp\_info CURSOR WITH RETURN FOR  
SELECT empno, lastname AS l\_name, firstnme AS f\_name FROM employee WHERE  
employee.workdept = dept\_employees.deptno OPEN emp\_info; RETURN

**Answer: C**

2.In the function shown below:

```
CREATE FUNCTION fcn1(deptno CHAR(3))
  RETURNS TABLE(empno CHAR(6),
                  firstnme VARCHAR(12))
  READS SQL DATA
  RETURN
    SELECT empno, firstnme
    FROM employee
    WHERE employee.workdept = fcn1.deptno;
```

- A. SELECT \* FROMTABLE(fcn1('B01'))
- B. SELECTTABLE(fcn1('B01')) FROM SYSIBM.SYSDUMMY1
- C. SELECT \* FROMfcn1('B01')
- D. SELECTfcn1('B01') FROM SYSIBM.SYSDUMMY1

**Answer: A**

3.Which statement correctly describes characteristics of external functions?

- A. External functions cannot return tables.
- B. All cursors opened within an external function should stay open until the database isquiesced.
- C. Scratchpads can be used to allocate dynamic memory required for multiple function invocations.
- D. Transactions can be terminated within external functions.

**Answer: C**

4.Click the Exhibit button.

| EMPNO  | FIRSTNAME<br>JOB     | LASTNAME<br>WORKDEPT |
|--------|----------------------|----------------------|
| 000010 | CHRISTINE<br>PRES    | HAAS<br>A00          |
| 000020 | MICHAEL<br>MANAGER   | THOMPSON<br>B01      |
| 000050 | JOHN<br>MANAGER      | GEYER<br>E01         |
| 000060 | IRVING<br>MANAGER    | STERN<br>D11         |
| 000070 | EVA<br>MANAGER       | PULASKI<br>D21       |
| 000090 | EILEEN<br>MANAGER    | HENDERSON<br>E11     |
| 000100 | THEODORE<br>MANAGER  | SPENSER<br>E21       |
| 000200 | DAVID<br>DESIGNER    | BROWN<br>D11         |
| 000210 | WILLIAM<br>DESIGNER  | JONES<br>D11         |
| 000220 | JENNIFER<br>DESIGNER | LUTZ<br>D11          |
| 000230 | JAMES<br>CLERK       | JEFFERSON<br>D21     |
| 000240 | SALVATORE<br>CLERK   | MARINO<br>D21        |
| 000250 | DANIEL<br>CLERK      | SMITH<br>D21         |
| 000260 | SYBIL<br>CLERK       | JOHNSON<br>E21       |
| 000270 | MARIA<br>CLERK       | PEREZ<br>D21         |
| 000280 | ETHEL<br>OPERATOR    | SCHNEIDER<br>E11     |
| 000290 | JOHN<br>OPERATOR     | PARKER<br>E11        |
| 000320 | RAMLAL<br>FIELDREP   | MEHTA<br>E21         |
| 000330 | WING                 | LEE                  |
| 200170 | KIYOSHI<br>DESIGNER  | YAMAMOTO<br>D11      |
| 200220 | REBA<br>DESIGNER     | JOHN<br>D11          |
| 200240 | ROBERT<br>CLERK      | MONTEVERDE<br>D21    |
| 200330 | HELENA<br>FIELDREP   | WONG<br>E21          |
| 200340 | ROY<br>FIELDREP      | ALONZO<br>E21        |

UDF definition:

```
CREATE FUNCTION getnumbemployee(p_dept
VARCHAR(3))
RETURNS TABLE (enum INT, empno VARCHAR(6),
                lastname VARCHAR(15),
                firstme VARCHAR(12))
RETURN SELECT ROW_NUMBER() OVER (),
e.empno, e.lastname, e.firstme
FROM employee e WHERE e.workde
```

Referring to the exhibit, how many rows will be returned by the SQL query shown below? SELECT \*

FROM TABLE(getnumemployee(21?) AS dSELECT \* FROM TABLE(getnumemployee(?21?) AS d

A.0

B.1

C.7

D.10

**Answer: C**

5.Which three optional clauses can be used when creating an external function? (Choose three.)

A. SCRATCHPAD

B. NOTEPAD

C. LANGUAGE

D. EXTERNAL NAME

E. DATABASEINFO

**Answer: A,C,D**

6.Which statement is permitted within a scalar user-defined function body?

A. COMMIT

B. INSERT

C. SIGNAL

D. LOOP

**Answer: C**

7.Click the Exhibit button.

```
CREATE FUNCTION emp_birthdays (month INTEGER)
  RETURNS TABLE (l_name VARCHAR(15),
                  f_name VARCHAR(12),
                  month VARCHAR(20),
                  day INTEGER);
LANGUAGE SQL
READS SQL DATA
NO EXTERNAL ACTION
RETURN
  SELECT lastname, firstname, MONTHNAME(birthdate),
         DAY(birthdate)
  FROM employee
  WHERE MONTH(employee.birthdate) =
emp_birthdays.month
```

A user-defined function was created using the statement shown in the exhibit. Which additional option can be added to the CREATE FUNCTION statement to tell the optimizer that the function does not always return the same results for a given argument value?

- A. NO EXTERNAL ACTION
- B. NOT FENCED
- C. NOT DETERMINISTIC
- D. STATIC DISPATCH

**Answer: C**

8. Given the following SQL:

```
CREATE PROCEDURE test_proc()
BEGIN
  DECLARE c1 CURSOR FOR
  VALUES ('NAME1','NAME2','NAME3');
  OPEN c1;
END
```

Which statement is incorrect?

- A. The procedure declaration requires the DYNAMIC RESULT SETS 1 clause in order to return a result set.
- B. The cursor declaration requires the WITH RETURN TO CLIENT clause in order to return a result set.
- C. The cursor declaration requires the WITH RETURN TO CALLER clause in order to return a result set.
- D. The cursor declaration requires the WITH RETURN clause in order to return a result set.

**Answer: A**

9. Given the following SQL:

```
CREATE PROCEDURE test_proc()
BEGIN
  DECLARE i INTEGER DEFAULT 1;
  WHILE i < 10 DO
  BEGIN
    DECLARE cur CURSOR FOR
      VALUES ('NAME1','NAME2','NAME3');
    OPEN cur;
    SET index = index + 1;
  END;
  END WHILE;
END
```

Which of the following statements is true?

- A. The procedure declaration requires the DYNAMIC RESULT SETS 1 clause in order to return a result set.
- B. The cursor declaration requires WITH RETURN TO CLIENT clause in order to return a result set.
- C. The cursor declaration requires WITH RETURN TO CALLER clause in order to return a result set.
- D. The cursor declaration requires WITH RETURN clause in order to return a result set.

**Answer: B**

10. In the stored procedure below: What will the value of the P\_ID parameter be if the procedure is invoked and a value of 2 is specified for the START\_VALUE parameter?



```

CREATE PROCEDURE proc_labels (IN start_value INT, OUT p_ID INT)
s1: BEGIN
  DECLARE v_ID INT;
  s2: BEGIN
    DECLARE v_ID INT;
    SET v_ID = start_value;
    SET s1.v_ID = v_ID + s2.v_ID;
    SET v_ID = 3;
    SET p_ID = s2.v_ID;
  END;
END s1

```

- A. 1
- B. 2
- C. 3
- D. 4

**Answer: C**

11.Which procedure demonstrates the correct use of dynamic SQL?

- A. CREATE PROCEDURE update\_count1 (INnew\_count INTEGER, IN item\_code INTEGER) BEGIN DECLARE v\_dynSQL VARCHAR(200); SET v\_dynSQL = 'UPDATE stock SET quantity\_on\_hand=? WHERE item\_number=?'; PREPARE v\_stmt1 FROM v\_dynSQL; EXECUTE v\_stmt1 USING new\_count, item\_code; END
- B. CREATE PROCEDURE update\_count2 (INtab\_name VARCHAR(128), IN new\_count INTEGER, IN item\_code INTEGER) BEGIN DECLARE v\_dynSQL VARCHAR(200); SET v\_dynSQL = 'UPDATE ? SET quantity\_on\_hand=? WHERE item\_number=?'; PREPARE v\_stmt1 FROM v\_dynSQL; EXECUTE v\_stmt1 USING tab\_name, new\_count, item\_code; END
- C. CREATE PROCEDURE update\_count4 (INtab\_name VARCHAR(128), IN col\_name1 VARCHAR(128), IN col\_name2 VARCHAR(128), IN new\_countINTEGER, IN item\_code INTEGER) BEGIN  
  
DECLARE v\_dynSQL VARCHAR(200); SET v\_dynSQL = 'UPDATE ? SET ?? WHERE ??'; PREPARE v\_stmt1 FROM v\_dynSQL; EXECUTE v\_stmt1 USING tab\_name, col\_name1, new\_count, col\_name2, item\_code; END
- D. CREATE PROCEDURE update\_count5 (INnew\_count INTEGER, IN item\_code INTEGER) BEGIN DECLARE v\_dynSQL VARCHAR(200); DECLARE v\_col\_name VARCHAR(128); SET v\_col\_name =

'item\_number'; SET v\_dynSQL = 'UPDATE stock SET quantity\_on\_hand=? WHERE ?=?'; PREPARE v\_stmt1 FROM v\_dynSQL; EXECUTE v\_stmt1 USING new\_count, v\_col\_name, item\_code; END

**Answer: A**

12.A developer wants to code the following statements in an SQL procedure:

|  |        |
|--|--------|
| SET salary = salary * 1.05;                          | ---- 1 |
| DECLARE empid INTEGER;                               | ---- 2 |
| DECLARE EXIT HANDLER FOR NOT FOUND<br>SET empid = 0; | ---- 3 |
| DECLARE cursor1 CURSOR FOR SELECT * FROM employee;   | ---- 4 |

A. 1, 2, 3, 4

B. 2, 4, 3, 1

C. 3, 4, 2, 1

D. 4, 3, 2, 1

**Answer: B**

13.What is a reason to use SQL procedures in DB2?

A. to use different programming languages B. to reduce code sharing

C. to move business logic rules into the database

D. to eliminate the need for testing

**Answer: C**

14.Which SQL procedure declaration is coded correctly?

A. CREATE PROCEDUREmyproc(IN salary DOUBLE, OUT commission DOUBLE) BEGIN DECLARE EXIT HANDLER FOR SQLEXCEPTION SET commission = 0; DECLARE my\_cur CURSOR FOR SELECT \* FROM employee; DECLARE a DOUBLE; SET a = .06 \* salary; SET commission = a; END

B. CREATE PROCEDUREmyproc(IN salary DOUBLE, OUT commission DOUBLE) BEGIN DECLARE EXIT HANDLER FOR SQLEXCEPTION SET commission = 0; DECLARE a DOUBLE; DECLARE my\_cur CURSOR FOR SELECT \* FROM employee; SET a = .06 \* salary; SET commission = a; END

C. CREATE PROCEDURE myproc(IN salary DOUBLE, OUT commission DOUBLE) BEGIN DECLARE a DOUBLE; DECLARE EXIT HANDLER FOR SQLEXCEPTION SET commission = 0; DECLARE my\_cur CURSOR FOR SELECT \* FROM employee; SET a = .06 \* salary; SET commission = a; END

D. CREATE PROCEDURE myproc(IN salary DOUBLE, OUT commission DOUBLE) BEGIN DECLARE a DOUBLE; DECLARE my\_cur CURSOR FOR SELECT \* FROM employee; DECLARE EXIT HANDLER FOR SQLEXCEPTION

SET commission = 0; SET a = .06 \* salary; SET commission = a; END

**Answer: D**

15. The CREATE PROCEDURE statement shown below was executed against a database called MYDB. CREATE PROCEDURE myschema.proc1(IN p1 INTEGER, OUT p2 CHAR(4), OUT p3 SMALLINT) BEGIN SET p2 = 'abc'; END Which two CREATE PROCEDURE statements, when executed against the same database, will succeed? (Choose two.)

A. CREATE PROCEDURE myschema.proc1(IN p1 CHAR(4), OUT p2 INTEGER) BEGIN SET p2 = 123; END

B. CREATE PROCEDURE myschema.proc1(IN p1 INTEGER, OUT p2 CHAR(4), OUT p3 CHAR(4)) BEGIN SET p2 = 'abc'; END

C. CREATE PROCEDURE myschema.proc1(IN p1 CHAR(4), OUT p2 INTEGER, OUT p3 SMALLINT) BEGIN SET p2 = 123; END

D. CREATE PROCEDURE otherschema.proc1(IN p1 CHAR(4), OUT p2 CHAR(4), OUT p3 CHAR(4)) BEGIN SET p2 = 'abc'; END

E. CREATE PROCEDURE myschema.proc1(IN p1 NUMBER, OUT p2 NUMBER, OUT p3 NUMBER) BEGIN SET p2 = 'abc'; END

**Answer: A,D**

16. If this statement was used to create an SQL procedure named P\_EXIT:

```
CREATE PROCEDURE p_exit (IN p_in INTEGER, OUT p_out INTEGER)
BEGIN
  IF (p_in < 0) THEN
    SIGNAL SQLSTATE '70001' SET MESSAGE_TEXT = 'Custom SQL State';
  ELSEIF (p_in < 10) THEN
    RETURN 10;
  ELSE
    SET p_out = 20;
  END IF;
  RETURN 99;
END
```

- A. 10
- B. 20
- C. 99
- D. NULL

**Answer: C**

17.The CREATE OR REPLACE PROCEDURE statement is similar semantically to which of the following combined statements?

- A. DROP and CREATE PROCEDURE
- B. ALTER and CREATE PROCEDURE
- C. UPDATE and CREATE PROCEDURE
- D. DROP and ALTER PROCEDURE

**Answer: A**

18.Given the two SQL procedures shown below: What is the expected output if procedure S1 is invoked with the value 1 provided for parameter V1?

```
CREATE PROCEDURE s2(IN p1 INT, OUT p2 INT)
BEGIN
    SET p2 = p1 + 3;
END
```

```
CREATE PROCEDURE s1(IN v1 INT, OUT v2 INT)
BEGIN
    DECLARE v3 INT;
    SET v3 = v1 + 1;
    CALL s2(v3,v2);
    SET v2 = v2 + 2;
END
```

- A. NULL
- B. 2
- C. 5

D. 7

**Answer: D**

19.Which CREATE PROCEDURE statement option should be used if you plan on issuing a DECLARE GLOBAL TEMPORARY TABLE statement from within the SQL procedure body?

A. CONTAINS SQL

B. READS SQL DATA

C. MODIFIES SQL DATA

D. LANGUAGE SQL

**Answer: C**

20.Click on the Exhibit button.

```
CREATE TYPE phonenumbers AS VARCHAR(12)
ARRAY[1000]

CREATE PROCEDURE find_customers( IN numbers_in
phonenumbers,
                                IN area_code
                                CHAR(3),
                                OUT numbers_out
phonenumbers)
BEGIN
  DECLARE i, j, max INTEGER;
  SET i = 1;
  SET j = 1;
  SET numbers_out = NULL;
  SET max = CARDINALITY(numbers_in);

  WHILE i <= max DO
    IF SUBSTR(numbers_in[i], 1, 3) = area_code THEN
      SET numbers_out[j] = numbers_in[i];
      SET j = j + 1;
    END IF;
    SET i = i + 1;
  END WHILE;
END
```

Referring to the exhibit, what is the OUT\_PHONENUMBERS result set when the SQL procedure is invoked by the call statement shown below? CALL

find\_customers(ARRAY[?16-305-3745? ?05-416-4565? ?16-305-3746? '905-414-4566'], ?16??)

- A. [?16-305-3745??05-416-4565? ?16-305-3746']
- B. [?16-305-3745??05-416-4565? ?16-305-3746? '905-414-4566']
- C. [?05-416-4565? '905-414-4566']
- D. [?16-305-3745? ?16-305-3746[?16-305-3745? ?16-305-3746?

**Answer: D**