Review your answers, feedback, and question scores below. An asterisk (\*) indicates a correct answer.

Part II of the Semester 2 Final Exam covers Sections 10-14 of Database Programming with SQL.

Section 10

1. The FACULTY table contains these columns: FACULTYID VARCHAR2 (5) NOT NULL PRIMARY KEY FIRST NAME VARCHAR2 (20) LAST NAME VARCHAR2 (20) ADDRESS VARCHAR2 (35) CITY VARCHAR2 (15) STATE VARCHAR2 (2) ZIP NUMBER (9) TELEPHONE NUMBER (10) STATUS VARCHAR2(2) NOT NULL The COURSE table contains these columns: COURSEID VARCHAR2 (5) NOT NULL PRIMARY KEY SUBJECT VARCHAR2 (5)

TERM VARCHAR2 (6) FACULTYID VARCHAR2 (5) NOT NULL FOREIGN KEY

You have been asked to compile a report that identifies all adjunct professors who will be teaching classes in the upcoming term. You want to create a view that will simplify the creation of this report. Which CREATE VIEW statements will accomplish this task?

Mark for Review

(1) Points

CREATE VIEW (SELECT first name, last name, status, courseid, subject, term FROM faculty, course WHERE facultyid = facultyid);

CREATE VIEW pt view ON (SELECT first name, last name, status, courseid, subject, term FROM faculty f and course c WHERE f.facultyid = c.facultyid);

CREATE VIEW pt view IN (SELECT first name, last name, status, courseid, subject, term FROM faculty course);

CREATE VIEW pt view AS (SELECT first name, last name, status, courseid, subject, term FROM faculty f, course c WHERE f.facultyid = c.facultyid);

- 2. Which statement about the CREATE VIEW statement is true? Mark for Review  $\,$
- (1) Points
  - A CREATE VIEW statement CAN contain a join query. (\*)
  - A CREATE VIEW statement CANNOT contain an ORDER BY clause.
  - A CREATE VIEW statement CANNOT contain a function.
  - A CREATE VIEW statement CANNOT contain a GROUP BY clause.

Correct

- 3. Which keyword(s) would you include in a CREATE VIEW statement to create the view regardless of whether or not the base table exists? Mark for Review  $\frac{1}{2}$
- (1) Points

FORCE (\*)

NOFORCE

OR REPLACE

WITH READ ONLY

Correct

- 4. Which of the following statements is a valid reason for using a view? Mark for Review  $\ \ \,$
- (1) Points

Views allow access to the data because the view displays all of the columns from the table.

Views provide data independence for infrequent users and application programs. One view can be used to retrieve data from several tables. Views can be used to provide data security. (\*)

Views are used when you only want to restrict DML operations using a WITH CHECK OPTION.

Views are not valid unless you have more than one user.

Correct

5. Evaluate this CREATE VIEW statement: CREATE VIEW emp view AS SELECT SUM(salary) FROM employees; Which statement is true? Mark for Review (1) Points You cannot update data in the EMPLOYEES table using the EMP VIEW You can update any data in the EMPLOYEES table using the EMP VIEW view. You can delete records from the EMPLOYEES table using the EMP VIEW view. You can update only the SALARY column in the EMPLOYEES table using the EMP VIEW view. Correct 6. Evaluate this CREATE VIEW statement: CREATE VIEW pt view AS (SELECT first name, last name, status, courseid, subject, term FROM faculty f, course c WHERE f.facultyid = c.facultyid); Which type of view will this statement create? Mark for Review (1) Points Nested Simple Inline Complex (\*) Correct 7. Which statement would you use to alter a view? Mark for Review (1) Points ALTER VIEW MODIFY VIEW ALTER TABLE

8. You need to create a view that when queried will display the name, employee identification number, first and last name, salary, and department identification number. When queried, the display should be sorted by salary from lowest to highest, then by last name and first name alphabetically. The view definition should be created regardless of the existence of the EMPLOYEES table. No DML may be performed when using this view. Evaluate these statements:

CREATE OR REPLACE NOFORCE VIEW EMP\_SALARY\_V
AS SELECT employee\_id, last\_name, first\_name, salary, department\_id
FROM employees WITH READ ONLY;

SELECT \*
FROM emp\_salary\_v
ORDER BY salary, last name, first name;

Which statement is true?
Mark for Review
(1) Points

When both statements are executed all of the desired results are achieved.

The CREATE VIEW statement will fail if the EMPLOYEES table does not exist. (\*)

The statements will NOT return all of the desired results because the WITH CHECK OPTION clause is NOT included in the CREATE VIEW statement.

To achieve all of the desired results this ORDER ON clause should be added to the CREATE VIEW statement: 'ORDER ON salary, last\_name, first name'

Correct

9. Evaluate this CREATE VIEW statement:
CREATE VIEW sales\_view
AS SELECT customer\_id, region, SUM(sales\_amount)
FROM sales
WHERE region IN (10, 20, 30, 40)
GROUP BY region, customer id;

Which statement is true?
Mark for Review
(1) Points

You can modify data in the SALES table using the SALES VIEW view.

You cannot modify data in the SALES table using the SALES\_VIEW view. (\*)

You can only insert records into the SALES table using the SALES\_VIEW view.

The CREATE VIEW statement generates an error.

Correct

- 10. An inline view is an unnamed select statement found: Mark for Review
- (1) Points

In the user views data dictionary view

In a special database column of a users table

Enclosed in parentheses within the select list of a surrounding query

Enclosed in parentheses within the from clause of a surrounding query  $(\star)$ 

Correct

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Test: Final Exam Semester 2 - Part II

Review your answers, feedback, and question scores below. An asterisk (\*) indicates a correct answer.

Part II of the Semester 2 Final Exam covers Sections 10-14 of Database Programming with SQL.

Section 10

11. You must create a view that when queried will display the name, customer identification number, new balance, finance charge and credit limit of all customers. You issue this statement:

CREATE OR REPLACE VIEW CUST\_CREDIT\_V

AS SELECT c.last\_name, c.customer\_id, a.new\_balance, a.finance\_charge, a.credit\_limit

FROM customers c, accounts a

WHERE c.account id = a.account id WITH READ ONLY;

```
Which type of SQL command can be issued on the CUST CREDIT V view?
Mark for Review
(1) Points
   UPDATE
    DELETE
    INSERT
    SELECT (*)
      Correct
  12. The CUSTOMER FINANCE table contains these columns:
CUSTOMER ID NUMBER (9)
NEW BALANCE NUMBER (7,2)
PREV BALANCE NUMBER (7,2)
PAYMENTS NUMBER (7,2)
FINANCE CHARGE NUMBER (7,2)
CREDIT LIMIT NUMBER (7)
You created a Top-n query report that displays the account numbers and
new balance of the 800 accounts that have the highest new balance value.
The results are sorted by payments value from highest to lowest. Which
SELECT statement clause is included in your query?
Mark for Review
(1) Points
    Inner query: ORDER BY new balance DESC (*)
    Inner query: WHERE ROWNUM = 800
    Outer query: ORDER BY new balance DESC
    Inner query: SELECT customer id, new balance ROWNUM
      Correct
  13. Evaluate this SELECT statement:
SELECT ROWNUM "Rank", customer id, new balance
FROM (SELECT customer id, new balance FROM customer finance
ORDER BY new balance DESC)
WHERE ROWNUM <= 25; <p> Which type of query is this SELECT statement?
Mark for Review
(1) Points
    A Top-n query (*)
    A complex view
    A simple view
```

14. Your manager has just asked you to create a report that illustrates the salary range of all the employees at your company. Which of the following SQL statements will create a view called SALARY\_VU based on the employee last names, department names, salaries, and salary grades for all employees? Use the EMPLOYEES, DEPARTMENTS, and JOB\_GRADES tables. Label the columns Employee, Department, Salary, and Grade, respectively. Mark for Review

(1) Points

CREATE OR REPLACE VIEW salary\_vu

AS SELECT e.last\_name "Employee", d.department\_name "Department",
e.salary "Salary", j. grade\_level "Grade"

FROM employees e, departments d, job\_grades j

WHERE e.department\_id equals d.department\_id AND e.salary BETWEEN
j.lowest\_sal and j.highest\_sal;

CREATE OR REPLACE VIEW salary\_vu

AS SELECT e.empid "Employee", d.department\_name "Department", e.salary
"Salary", j. grade\_level "Grade"

FROM employees e, departments d, job\_grades j

WHERE e.department\_id = d.department\_id NOT e.salary BETWEEN j.lowest\_sal
and j.highest\_sal;

CREATE OR REPLACE VIEW salary\_vu

AS SELECT e.last\_name "Employee", d.department\_name "Department",
e.salary "Salary", j. grade\_level "Grade"

FROM employees e, departments d, job\_grades j

WHERE e.department\_id = d.department\_id AND e.salary BETWEEN j.lowest\_sal
and j.highest\_sal;

(\*)

CREATE OR REPLACE VIEW salary\_vu

AS (SELECT e.last\_name "Employee", d.department\_name "Department",
e.salary "Salary", j. grade\_level "Grade"

FROM employees emp, departments d, job grades j

WHERE e.department\_id = d.department\_id AND e.salary BETWEEN j.lowest\_sal
and j.highest\_sal);

Correct

15. You create a view on the EMPLOYEES and DEPARTMENTS tables to display salary information per department. What will happen if you issue the following statement:

CREATE OR REPLACE VIEW sal\_dept

AS SELECT SUM(e.salary) sal, d.department\_name

FROM employees e, departments d

WHERE e.department id = d.department id GROUP BY d.department name ORDER BY d.department name; Mark for Review (1) Points

A complex view is created that returns the sum of salaries per department, sorted by department name. (\*)

A simple view is created that returns the sum of salaries per department, sorted by department name.

A complex view is created that returns the sum of salaries per department, sorted by department id.

Nothing, as the statement constains an error and will fail.

Correct

16. What is the purpose of including the WITH CHECK OPTION clause when creating a view? Mark for Review

(1) Points

To make sure that the parent table(s) actually exist

To keep views form being queried by unauthorized persons

To make sure that data is not duplicated in the view

To make sure no rows are updated through the view that will hinder those rows from being returned by the view. (\*)

Correct

- 17. Which statement about performing DML operations on a view is true? Mark for Review
- (1) Points

You can delete data in a view if the view contains the DISTINCT keyword.

You cannot modify data in a view if the view contains a WHERE clause.

You cannot modify data in a view if the view contains a group function. (\*)

You can modify data in a view if the view contains a GROUP BY clause.

Correct

18. You administer an Oracle database. Jack manages the Sales department. He and his employees often find it necessary to query the database to identify customers and their orders. He has asked you to create a view that will simplify this procedure for himself and his staff. The view should not accept INSERT, UPDATE or DELETE operations. Which of the following statements should you issue? Mark for Review (1) Points

CREATE VIEW sales\_view
AS (SELECT companyname, city, orderid, orderdate, total
FROM customers, orders
WHERE custid = custid)
WITH READ ONLY;

CREATE VIEW sales\_view
(SELECT c.companyname, c.city, o.orderid, o. orderdate, o.total
FROM customers c, orders o
WHERE c.custid = o.custid)
WITH READ ONLY;

CREATE VIEW sales\_view
AS (SELECT c.companyname, c.city, o.orderid, o. orderdate, o.total
FROM customers c, orders o
WHERE c.custid = o.custid);

CREATE VIEW sales\_view
AS (SELECT c.companyname, c.city, o.orderid, o. orderdate, o.total
FROM customers c, orders o
WHERE c.custid = o.custid)
WITH READ ONLY;
(\*)

Correct

19. Which statement about performing DML operations on a view is true? Mark for Review

(1) Points

You can perform DML operations on simple views. (\*)

You cannot perform DML operations on a view that contains the WITH CHECK OPTION clause.

You can perform DML operations on a view that contains the WITH READ ONLY option.

You can perform DML operations on a view that contains columns defined by expressions, such as  ${\tt COST}$  + 1.

Correct

- 20. Which of the following is TRUE regarding simple views? Mark for Review
- (1) Points

They derive data from many tables, so they typically contain joins.

They contain functions or groups of data

They can perform DML operations through the view (\*)

They are not stored in the Data Dictionary

Correct

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Test: Final Exam Semester 2 - Part II

Review your answers, feedback, and question scores below. An asterisk (\*) indicates a correct answer.

Part II of the Semester 2 Final Exam covers Sections 10-14 of Database Programming with SQL.

Section 11

- 21. The CUSTOMERS table exists in user Mary's schema. Which statement should you use to create a synonym for all database users on the CUSTOMERS table? Mark for Review
- (1) Points

CREATE PUBLIC SYNONYM cust ON mary.customers;

CREATE PUBLIC SYNONYM cust FOR mary.customers; (\*)

CREATE SYNONYM cust ON mary.customers FOR PUBLIC;

CREATE SYNONYM cust ON mary.customers; GRANT SELECT ON cust TO PUBLIC;

(1) Points

The EMPLOYEES table has an index named LN IDX on the LAST NAME column. You want to change this index so that it is on the FIRST NAME column instead. Which SQL statement will do this? Mark for Review (1) Points ALTER INDEX ln idx ON employees(first name); ALTER INDEX in idx TO employees(first name); ALTER INDEX ln idx TO fn\_idx ON employees(first\_name); None of the above; you cannot ALTER an index. (\*) Incorrect. Refer to Section 11 23. Barry creates a table named INVENTORY. Pam must be able to query the table. Barry wants to enable Pam to query the table without being required to specify the table's schema. Which of the following should Barry create? Mark for Review (1) Points A schema An index A view A synonym (\*) Correct 24. The EMPLOYEES table contains these columns: EMP ID NOT NULL, Primary Key SSNUM NOT NULL, Unique LAST NAME VARCHAR2 (25) FIRST NAME VARCHAR2 (25) DEPT ID NUMBER Foreign Key to DEPT ID column of the DEPARTMENTS table SALARY NUMBER (8,2) You execute this statement: CREATE INDEX emp\_name\_idx ON employees (last name, first name); Which statement is true? Mark for Review

The statement creates a function-based index.

The statement fails because of a syntax error.

The statement creates a composite unique index.

The statement creates a composite non-unique index. (\*)

Correct

25. Which of the following best describes the function of an index? Mark for Review  $\frac{1}{2}$ 

(1) Points

An index can increase the performance of SQL queries that search large tables. (\*)

An index can reduce the time required to grant multiple privileges to users.

An index can run statement blocks when DML actions occur against a table.

An index can prevent users from viewing certain data in a table.

Correct

26. What is the correct syntax for creating a private synonym d\_sum for the view DEPT\_SUM\_VU? Mark for Review
(1) Points

CREATE SYNONYM d\_sum ON dept sum vu;

CREATE d\_sum SYNONYM
FOR dept sum vu;

UPDATE dept\_sum\_vu
ON SYNONYM d sum;

CREATE SYNONYM d\_sum
FOR dept\_sum\_vu;
(\*)

Correct

27. You want to speed up the following query by creating an index: SELECT \* FROM employees WHERE (salary \* 12) > 100000;

```
Which of the following will achieve this?
Mark for Review
(1) Points
    Create a composite index on (salary, 12).
    Create a function-based index on (salary * 12). (*)
   Create an index on (salary).
    Create a function based index on ((salary * 12) > 100000).
      Correct
  28. Unique indexes are automatically created on columns that have
which two types of constraints? Mark for Review
(1) Points
   NOT NULL and UNIQUE
   UNIQUE and PRIMARY KEY (*)
   UNIQUE and FOREIGN KEY
    PRIMARY KEY and FOREIGN KEY
      Correct
  29. Which statement would you use to remove the LAST NAME IDX index on
the LAST NAME column of the EMPLOYEES table? Mark for Review
(1) Points
    DROP INDEX last name idx;
(*)
    DROP INDEX last name idx(last name);
    DROP INDEX last name idx(employees.last name);
    ALTER TABLE employees
DROP INDEX last name idx;
      Correct
```

30. Which of the following SQL statements will display the index name, table name, and the uniqueness of the index for all indexes on the EMPLOYEES table? Mark for Review

## (1) Points

CREATE index\_name, table\_name, uniqueness
FROM user\_indexes
WHERE table name = 'EMPLOYEES';

SELECT index\_name, table\_name, uniqueness
FROM 'EMPLOYEES';

SELECT index\_name, table\_name, uniqueness
FROM user\_indexes
WHERE table\_name = 'EMPLOYEES';
(\*)

SELECT index\_name, table\_name, uniqueness
FROM user\_indexes
WHERE index = EMPLOYEES;

Correct

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Test: Final Exam Semester 2 - Part II

Review your answers, feedback, and question scores below. An asterisk (\*) indicates a correct answer.

Part II of the Semester 2 Final Exam covers Sections 10-14 of Database Programming with SQL.

Section 11

31. What is the most common use for a Sequence? Mark for Review (1) Points

To generate primary key values (\*)

To improve the performance of some queries

To give an alternative name for an object

To logically represent subsets of data from one or more tables

Correct

32. Evaluate this statement: SELECT po\_itemid\_seq.CURRVAL FROM dual;

What does this statement accomplish?
Mark for Review
(1) Points

It resets the current value of the PO\_ITEM\_ID\_SEQ sequence.

It displays the current value of the PO\_ITEM\_ID\_SEQ sequence. ( $^{\star}$ )

It displays the next available value of the PO\_ITEM\_ID\_SEQ sequence.

It sets the current value of the PO\_ITEM\_ID\_SEQ sequence to the value of the PO ITEMID column.

Correct

33. Evaluate this CREATE SEQUENCE statement: CREATE SEQUENCE line item id seq CYCLE;

Which statement is true?
Mark for Review
(1) Points

The sequence cannot be used with more than one table.

The sequence preallocates values and retains them in memory.

The sequence cannot generate additional values after reaching its maximum value.

The sequence will continue to generate values after the maximum sequence value has been generated. (\*)

Correct

34. You create a CUSTOMERS table in which CUSTOMER\_ID is designated as a primary key. You want the values that are entered into the CUSTOMER\_ID column to be generated automatically. Which of the following actions should you perform? Mark for Review
(1) Points

Do nothing. Oracle automatically generates unique values for columns that are defined as primary keys.

```
Specify a UNIQUE constraint on the CUSTOMER ID column.
    Create a synonym.
    Create a sequence. (*)
      Correct
  35. Evaluate this statement:
CREATE SEQUENCE line item id seq
MINVALUE 100 MAXVALUE 130 INCREMENT BY -10 CYCLE;
What will be the first five numbers generated by this sequence?
Mark for Review
(1) Points
    The fifth number cannot be generated.
    130120110100130
    100110120130100
   The CREATE SEQUENCE statement will fail because a START WITH value
was not specified. (*)
      Correct
Section 12
 36. You want to grant user BOB the ability to change other users'
passwords. Which privilege should you grant to BOB? Mark for Review
(1) Points
    The ALTER USER privilege (*)
    The CREATE USER privilege
    The DROP USER privilege
    The CREATE PROFILE privilege
      Correct
  37. Which of the following are object privileges?
(Choose two) Mark for Review
(1) Points
   (Choose all correct answers)
   SELECT (*)
```

DROP TABLE

CREATE TABLE

INSERT (\*)

Correct

38. Which of the following are system privileges? (Choose two) Mark for Review

(1) Points

(Choose all correct answers)

CREATE TABLE (\*)

UPDATE

CREATE SYNONYM (\*)

INDEX

Correct

39. User ADAM has successfully logged on to the database in the past, but today he receives an error message stating that (although he has entered his password correctly) he cannot log on. What is the most likely cause of the problem? Mark for Review (1) Points

One or more object privileges have been REVOKEd from Adam.

ADAM's CREATE SESSION privilege has been revoked. (\*)

ADAM's CREATE USER privilege has been revoked.

ADAM's user account has been removed from the database.

Incorrect. Refer to Section 12

40. You are the database administrator. You want to create a new user JONES with a password of MARK, and allow this user to create his own tables. Which of the following should you execute? Mark for Review (1) Points

CREATE USER jones IDENTIFIED BY mark; GRANT CREATE TABLE TO jones;

CREATE USER jones IDENTIFIED BY mark; GRANT CREATE SESSION TO jones;

GRANT CREATE TABLE TO jones;
(\*)

GRANT CREATE SESSION TO jones; GRANT CREATE TABLE TO jones;

CREATE USER jones IDENTIFIED BY mark; GRANT CREATE SESSION TO jones;

Correct

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Test: Final Exam Semester 2 - Part II

Review your answers, feedback, and question scores below. An asterisk (\*) indicates a correct answer.

Part II of the Semester 2 Final Exam covers Sections 10-14 of Database Programming with SQL.

Section 12

41. Evaluate this statement: ALTER USER bob IDENTIFIED By jim;

Which statement about the result of executing this statement is true? Mark for Review  $\overline{\ }$ 

(1) Points

A new password is assign to user BOB. (\*)

A new user JIM is created from user BOB's profile.

The user BOB is assigned the same privileges as user JIM.

The user BOB is renamed and is accessible as user JIM.

Correct

42. You create a view named EMPLOYEES\_VIEW on a subset of the EMPLOYEES table. User AUDREY needs to use this view to create reports. Only you and Audrey should have access to this view. Which of the following actions should you perform? Mark for Review (1) Points

Do nothing. As a database user, Audrey's user account has automatically been granted the SELECT privilege for all database objects.

GRANT SELECT ON employees view TO public;

GRANT SELECT ON employees view TO audrey; (\*)

GRANT SELECT ON employees AND employees view TO audrey;

Correct

- 43. Granting an object privilege WITH GRANT OPTION allows the recipient to grant other object privileges on the table to other users. Mark for Review  $\frac{1}{2}$
- (1) Points

True

False (\*)

Correct

- 44. You need to grant user BOB SELECT privileges on the EMPLOYEES table. You want to allow BOB to grant this privileges to other users. Which statement should you use? Mark for Review
- (1) Points

GRANT SELECT ON employees TO bob WITH GRANT OPTION; (\*)

GRANT SELECT ON employees TO PUBLIC WITH GRANT OPTION;

GRANT SELECT ON employees TO bob;

GRANT SELECT ON employees TO bob WITH ADMIN OPTION;

Correct

45. Which statement would you use to remove an object privilege granted to a user? Mark for Review  ${}^{\prime}$ 

(1) Points

ALTER USER

REVOKE (\*)

DROP

Correct

46. User BOB's schema contains an EMPLOYEES table. BOB executes the following statement:

GRANT SELECT ON employees TO mary WITH GRANT OPTION;

Which of the following statements can MARY now execute successfully? (Choose two)

Mark for Review

(1) Points

(Choose all correct answers)

SELECT FROM bob.employees; (\*)

REVOKE SELECT ON bob.employees FROM bob;

GRANT SELECT ON bob.employees TO PUBLIC; (\*)

DROP TABLE bob.employees;

Correct

47. Which data dictionary view shows which system privileges have been granted to a user? Mark for Review  $\frac{1}{2}$ 

(1) Points

USER TAB PRIVS

USER SYS PRIVS (\*)

USER SYSTEM PRIVS

USER SYSTEM PRIVILEGES

Correct

- 48. When granting an object privilege, which option would you include to allow the grantee to grant the privilege to another user? Mark for Review
- (1) Points

WITH GRANT OPTION (\*)

WITH ADMIN OPTION

PUBLIC

```
Section 14
  49. Steven King's row in the EMPLOYEES table has EMPLOYEE ID = 100 and
SALARY = 24000. A user issues the following statements in the order
UPDATE employees
SET salary = salary * 2
WHERE employee id = 100;
COMMIT;
UPDATE employees
SET salary = 30000
WHERE employee id = 100;
The user's database session now ends abnormally. What is now King's
salary in the table?
Mark for Review
(1) Points
    48000 (*)
    30000
    24000
    78000
      Correct
  50. Examine the following statements:
UPDATE employees SET salary = 15000;
SAVEPOINT upd1 done;
UPDATE employees SET salary = 22000;
SAVEPOINT upd2 done;
DELETE FROM employees;
You want to retain all the employees with a salary of 15000; What
statement would you execute next?
Mark for Review
(1) Points
    ROLLBACK;
    ROLLBACK TO SAVEPOINT upd1 done; (*)
    ROLLBACK TO SAVEPOINT upd2 done;
```

ROLLBACK TO SAVE upd1 done;

There is nothing you can do, either all changes must be rolled back, or none of them can be rolled back.

Correct

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