CC6001 - Advanced Database Systems Development
SQL Class Test - Sample
Tuesday 2nd of April 2019

Student ID	
First Name	
Last Name	
Signature	
Room Number	

Exam Type Unseen Class Test
Material Supplied Questions/Answers Booklet
Material Permitted None

Instructions to Candidate

Answers all questions
There are 25 multiple choice questions
Place a circle around your chosen answers(s)

DO NOT TURN PAGE OVER UNTIL INSTRUCTED

QUESTION NO: 1

You own a table called EMPLOYEES with this table structure:

EMPLOYEE_ID NUMBER Primary Key
FIRST_NAME VARCHAR2(25)
LAST_NAME VARCHAR2(25)
HIRE_DATE DATE

What happens when you execute this DELETE statement?

DELETE employees;

A. You get an error because of a primary key violation.

B. The data and structure of the EMPLOYEES table are deleted.

C. You get an error because the statement is not syntactically correct.

D. The data in the EMPLOYEES table is deleted but not the structure.

QUESTION NO: 2

The CUSTOMERS table has these columns:

CUSTOMER_ID NUMBER(4) NOT NULL
CUSTOMER_NAME VARCHAR2(100) NOT NULL
STREET_ADDRESS VARCHAR2(150)
CITY_ADDRESS VARCHAR2(50)
STATE_ADDRESS VARCHAR2(50)
PROVINCE_ADDRESS VARCHAR2(50)
COUNTRY_ADDRESS VARCHAR2(50)
POSTAL_CODE VARCHAR2(12)
CUSTOMER_PHONE VARCHAR2(20)

A promotional sale is being advertised to the customers in France. Which WHERE clause identifies customers that are located in France?

A. WHERE lower(country_address) = 'france'

B. WHERE lower(country_address) = "france"

C. WHERE lower(country_address) LIKE %france%

D. WHERE lower(country_address) = '%france%'

E. WHERE lower(country_address) IS 'france'

QUESTION NO: 3

Examine the data in the EMPLOYEES table.

LAST_NAME	DEPARTMENT_ID	SALARY
Getz	10	3000
Davis	20	1500
King	20	2200
Davis	30	5000
...		ActualTests

Which three subqueries work? (Choose three).

A. SELECT *
FROM employees
where salary > (SELECT MIN(salary)
FROM employees
GROUP BY department.id);

B. SELECT *
FROM employees
WHERE salary = (SELECT AVG(salary)
FROM employees
GROUP BY department_id);

C. SELECT distinct department_id
FROM employees
Where salary > ANY (SELECT AVG(salary)
FROM employees
GROUP BY department_id);

D. SELECT department_id
FROM employees
WHERE SALARY > ALL (SELECT AVG(salary)
FROM employees
GROUP BY department_id);

E. SELECT last_name
FROM employees
Where salary > ANY (SELECT MAX(salary)
FROM employees
GROUP BY department_id);

F. SELECT department_id
FROM employees
WHERE salary > ALL (SELECT AVG(salary)
FROM employees
GROUP BY AVG(SALARY));

QUESTION NO: 4

Which view should a user query to display the columns associated with the constraints on a table owned by the user?

A. USER_COLUMNS

B. USER_CONS_COLUMNS

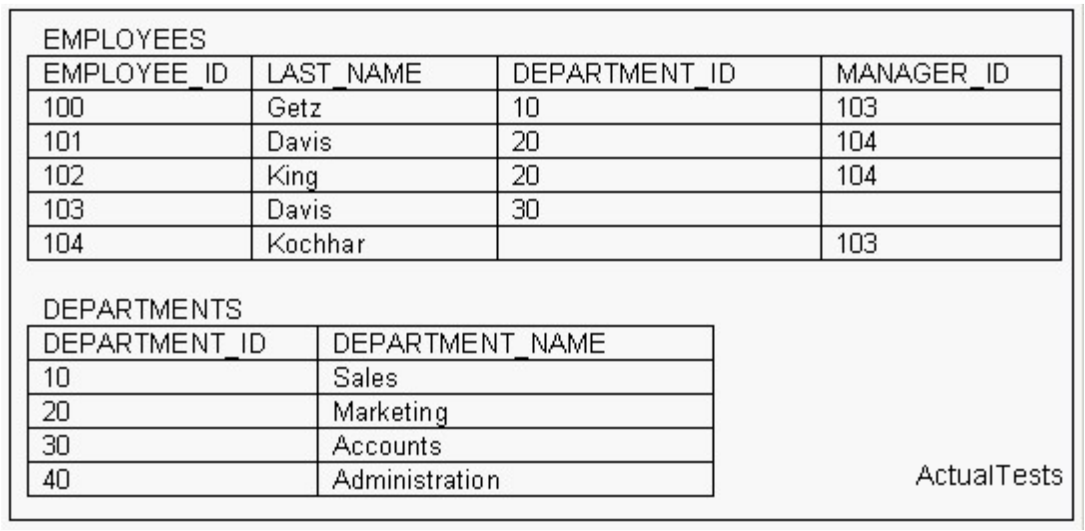
C. ALL_CONSTRAINTS

D. USER_OBJECTS

E. USER_CONSTRAINTS

QUESTION NO: 5

Examine the data in the EMPLOYEES and DEPARTMENTS tables.



EMPLOYEES

EMPLOYEE_ID	LAST_NAME	DEPARTMENT_ID	MANAGER_ID
100	Getz	10	103
101	Davis	20	104
102	King	20	104
103	Davis	30	
104	Kochhar		103

DEPARTMENTS

DEPARTMENT_ID	DEPARTMENT_NAME
10	Sales
20	Marketing
30	Accounts
40	Administration

You want to retrieve all employees' last names, along with their managers' last names and their department names. Which query would you use?

A. SELECT e.last_name, m.last_name, department_name
FROM employees e
LEFT OUTER JOIN employees m on (e.manager_id = m.employee_id)
RIGHT OUTER JOIN departments d ON (e.department_id = d.department_id);

B. SELECT e.last_name, m.last_name, department_name
FROM employees e
LEFT OUTER JOIN employees m on (e.manager_id = m.employee_id)
LEFT OUTER JOIN departments d ON (e.department_id = d.department_id);

C. SELECT last_name, manager_id, department_name
FROM employees e
JOIN departments d ON (e.department_id = d.department_id) ;

D. SELECT last_name, manager_id, department_name
FROM employees e
FULL OUTER JOIN departments d ON (e.department_id = d.department_id);

E. SELECT e.last_name, m.last_name, department_name
FROM employees e
RIGHT OUTER JOIN employees m on (e.manager_id = m.employee_id)
LEFT OUTER JOIN departments d ON (e.department_id = d.department_id);

F. SELECT e.last_name, m.last_name, department_name
FROM employees e
RIGHT OUTER JOIN employees m on (e.manager_id = m.employee_id)
RIGHT OUTER JOIN departments d ON (e.department_id = d.department_id);

QUESTION NO: 6

You need to create a view EMP_VU. The view should allow the users to manipulate the records of only the employees that are working for departments 10 or 20. Which SQL statement would you use to create the view EMP_VU?

A. CREATE VIEW emp_vu AS
SELECT *
FROM employees
WHERE department_id IN (10,20)
WITH READ ONLY;

B. CREATE VIEW emp_vu AS
SELECT *
FROM employees
WHERE department_id IN (10,20);

C. CREATE VIEW emp_vu AS
SELECT *
FROM employees
WHERE department_id IN (10,20)
WITH CHECK OPTION;

D. CREATE FORCE VIEW emp_vu AS
SELECT *
FROM employees
WHERE department_id IN (10,20);

E. CREATE FORCE VIEW emp_vu AS
SELECT *
FROM employees
WHERE department_id IN (10,20)
NO UPDATE;

QUESTION NO: 7

Which two statements complete a transaction? (Choose two).

A. ROLLBACK TO SAVEPOINT C;

B. SELECT MAX(sal)
FROM employees
WHERE department_id = 20;

C. GRANT SELECT ON employees TO SCOTT;

D. DESCRIBE employees;

E. ALTER TABLE employees
SET UNUSED COLUMN sal;

F. DELETE employees;

QUESTION NO: 8

What is true regarding subqueries?

A. The inner query must always return a value or the outer query will give an error.

B. The inner query returns a value to the outer query.

C. The inner query always sorts the results of the outer query.

D. The outer query must return a value to the inner query.

E. The outer query always sorts the results of the inner query.

QUESTION NO: 9

Which four are attributes of single row functions? (Choose four).

A. accept only one argument and return only one value

B. cannot be nested

C. manipulate data items

D. act on each row returned

E. return one result per row

F. accept arguments which can be a column or an expression

QUESTION NO: 10

Examine the structures of the EMPLOYEES and TAX tables.

EMPLOYEES

EMPLOYEE_ID	NUMBER	NOT NULL, Primary Key
EMP_NAME	VARCHAR2(30)	
JOB_ID	VARCHAR2(20)	
SALARY	NUMBER	
MGR_ID	NUMBER	References EMPLOYEE_ID column
DEPARTMENT_ID	NUMBER	Foreign key to DEPARTMENT_ID column of the DEPARTMENTS table

TAX

MIN_SALARY	NUMBER	
MAX_SALARY	NUMBER	
TAX_PERCENT	NUMBER	Percentage tax for given salary range

You need to find the percentage tax applicable for each employee. Which SQL statement would you use?

A. You cannot find the information because there is no common column between the two tables.

B. SELECT employee_id, salary, tax_percent
FROM employees e JOIN tax t
WHERE e.salary > t.min_salary AND < t.max_salary;

C. SELECT employee_id, salary, tax_percent
FROM employees e JOIN tax t
ON e.salary BETWEEN t.min_salary AND t.max_salary;

D. SELECT employee_id, salary, tax_percent
FROM employees e JOIN tax t
ON (MIN(e.salary) = t.min_salary
AND MAX(e.salary) = t.max_salary);

QUESTION NO: 11

Which SELECT statement will get the result 'elloworld' from the string 'HelloWorld'?

A. SELECT SUBSTR('HelloWorld',1) FROM dual;

B. SELECT INITCAP(TRIM ('HelloWorld', 1,1)) FROM dual;

C. SELECT LOWER(TRIM ('H' FROM 'HelloWorld')) FROM dual;

D. SELECT LOWER(SUBSTR('HelloWorld', 1, 1) FROM dual;

E. SELECT LOWER(SUBSTR('HelloWorld', 2, 1) FROM dual;

QUESTION NO: 12
Examine the data of the EMPLOYEES table.

EMPLOYEES (EMPLOYEE_ID is the primary key. MGR_ID is the ID of managers and refers to the EMPLOYEE_ID)

EMPLOYEE_ID	EMP_NAME	DEPT_ID	MGR_ID	JOB_ID	SALARY
101	Smith	20	120	SA_REP	4000
102	Martin	10	105	CLERK	2500
103	Chris	20	120	IT_ADMIN	4200
104	John	30	108	HR_CLERK	2500
105	Diana	30	108	HR_MGR	5000
106	Bryan	40	110	AD_ASST	3000
108	Jennifer	30	110	HR_DIR	6500
110	Bob	40		EX_DIR	8000
120	Ravi	20	110	SA_DIR	6500

Which statement lists the ID, name, and salary of the employee, and the ID and name of the employee's manager, for all the employees who have a manager and earn more than 4000?

A. SELECT employee_id "Emp_id", emp_name "Employee",
salary, employee_id "Mgr_id", emp_name "Manager"
FROM employees
WHERE salary > 4000;

B. SELECT e.employee_id "Emp_id", e.emp_name "Employee",
e.salary, m.employee_id "Mgr_id", m.emp_name "Manager"
FROM employees e, employees m
WHERE e.mgr_id = m.mgr_id
AND e.salary > 4000;

C. SELECT e.employee_id "Emp_id", e.emp_name "Employee",
e.salary, m.employee_id "Mgr_id", m.emp_name "Manager"
FROM employees e, employees m
WHERE e.mgr_id = m.employee_id
AND e.salary > 4000;

D. SELECT e.employee_id "Emp_id", e.emp_name "Employee",
e.salary, m.mgr_id "Mgr_id", m.emp_name "manager"
FROM employees e, employees m
WHERE e.mgr_id = m.employee_id
AND e.salary > 4000;

E. SELECT e.employee_id "Emp_id", e.emp_name "Employee",
e.salary, m.mgr_id "Mgr_id", m.emp_name "Manager"
FROM employees e, employees m
WHERE e.employee_id = m.employee_id
AND e.salary > 4000;

QUESTION NO: 13

Which SQL statement accepts user input for the columns to be displayed, the table name, and the WHERE condition?

A. SELECT &1, &2
FROM &3
WHERE last_name = '&4';

B. SELECT &1, '&2'
FROM EMP
WHERE last_name = '&4';

C. SELECT &1, "&2"
FROM &3
WHERE last_name = '&4';

D. SELECT &1, '&2'
FROM &3
WHERE '&last_name = '&4";

QUESTION NO: 14

Examine the structure of the EMPLOYEES table:

EMPLOYEE_ID NUMBER NOT NULL
EMP_NAME VARCHAR2(30)
JOB_ID VARCHAR2(20)
SAL NUMBER
MGR_ID NUMBER
DEPARTMENT_ID NUMBER

You want to create a SQL script file that contains an INSERT statement. When the script is run, the INSERT statement should insert a row with the specified values into the EMPLOYEES table.

The INSERT statement should pass values to the table columns as specified below:
EMPLOYEE_ID: Next value from the sequence EMP_ID_SEQ
EMP_NAME and JOB_ID: As specified by the user during run time, through substitution variables
SAL: 2000
MGR_ID: No value
DEPARTMENT_ID: Supplied by the user during run time through substitution variable.
The INSERT statement should fail if the user supplies a value other than 20 or 50.

Which INSERT statement meets the above requirements?

A. INSERT INTO employees
VALUES (emp_id_seq.NEXTVAL, '&ename', '&jobid',
2000, NULL, &did IN (20,50));

B. INSERT INTO (SELECT *
FROM employees
WHERE department_id IN (20,50))
VALUES (emp_id_seq.NEXTVAL, '&ename', '&jobid', 2000, NULL, &did);

C. INSERT INTO (SELECT *
FROM employees
WHERE department_id IN (20,50)
WITH CHECK OPTION)
VALUES (emp_id_seq.NEXTVAL, '&ename', '&jobid', 2000, NULL, &did);

D. INSERT INTO (SELECT *
FROM employees
WHERE (department_id = 20 AND
department_id = 50)
WITH CHECK OPTION)
VALUES (emp_id_seq.NEXTVAL, '&ename', '&jobid', 2000, NULL, &did);

E. INSERT INTO employees
VALUES (emp_id_seq.NEXTVAL, '&ename', '&jobid', 2000, NULL, &did);

QUESTION NO: 15

Evaluate the SQL statement:

TRUNCATE TABLE DEPT;

Which three are true about the SQL statement? (Choose three).

A. You must be the owner of the table or have DELETE ANY TABLE system privileges to truncate the DEPT table.

B. You can roll back the deletion of rows after the statement executes.

C. You can NOT roll back the deletion of rows after the statement executes.

D. An attempt to use DESCRIBE on the DEPT table after the TRUNCATE statement executes will display an error.

E. It does not release the storage space used by the table.

F. It releases the storage space used by the table.

QUESTION NO: 16

The EMPLOYEES table has these columns:

LAST_NAME VARCHAR2(35)
SALARY NUMBER(8,2)
HIRE_DATE DATE

Management wants to add a default value to the SALARY column. You plan to alter the table by using this SQL statement:

```
ALTER TABLE EMPLOYEES
MODIFY (SALARY DEFAULT 5000);
```

Which is true about your ALTER statement?

A. A change to the DEFAULT value affects only subsequent insertions to the table.

B. All the rows that have a NULL value for the SALARY column will be updated with the value 5000.

C. Column definitions cannot be altered to add DEFAULT values.

D. Column definitions cannot be altered to add DEFAULT values for columns with a NUMBER data type.

QUESTION NO: 17

Examine the structure of the EMPLOYEES table:

EMPLOYEE_ID NUMBER NOT NULL, Primary Key
EMP_NAME VARCHAR2(30)
JOB_ID NUMBER
SAL NUMBER
MGR_ID NUMBER References EMPLOYEE_ID column
DEPARTMENT_ID NUMBER Foreign key to DEPARTMENT_ID column of the DEPARTMENTS table

You created a sequence called EMP_ID_SEQ in order to populate sequential values for the EMPLOYEE_ID column of the EMPLOYEES table.

Which two statements regarding the EMP_ID_SEQ sequence are true? (Choose two).

A. The EMP_ID_SEQ sequence is invalidated when you modify the EMPLOYEE_ID column.

B. The EMP_ID_SEQ sequence is dropped automatically when you drop the EMPLOYEE_ID column.

C. The EMP_ID_SEQ sequence is dropped automatically when you drop the EMPLOYEES table.

D. You cannot use the EMP_ID_SEQ sequence to populate the JOB_ID column.

E. The EMP_ID_SEQ sequence is not affected by modifications to the EMPLOYEES table.

F. Any other column of NUMBER data type in your schema can use the EMP_ID_SEQ sequence.

QUESTION NO: 18

Examine the description of the CUSTOMERS table:

CUSTOMER_ID NUMBER(4) NOT NULL
CUSTOMER_NAME VARCHAR2(100) NOT NULL
STREET_ADDRESS VARCHAR2(150)
CITY_ADDRESS VARCHAR2(50)
STATE_ADDRESS VARCHAR2(50)
PROVINCE_ADDRESS VARCHAR2(50)
COUNTRY_ADDRESS VARCHAR2(50)
POSTAL_CODE VARCHAR2(12)
CUSTOMER_PHONE VARCHAR2(20)
The CUSTOMER_ID column is the primary key for the table.

Which statement returns the city address and the number of customers in the cities Los Angeles or San Francisco?

A. SELECT city_address, COUNT(customer_id)
FROM customers
WHERE city_address IN ('Los Angeles', 'San Francisco')
GROUP BY city_address, customer_id;

B. SELECT city_address, COUNT(customer_id)
FROM customers
GROUP BY city_address IN ('Los Angeles', 'San Francisco');

C. SELECT city_address, COUNT(*)
FROM customers
WHERE city_address IN ('Los Angeles', 'San Francisco')
GROUP BY city_address;

D. SELECT city_address, COUNT(*)
FROM customers
WHERE city_address IN ('Los Angeles', 'San Francisco');

QUESTION NO: 19

A subquery can be used to ___.

A. convert data to a different format

B. create groups of data

C. retrieve data based on an unknown condition

D. sort data in a specific order

QUESTION NO: 20

Which is an iSQL*Plus command?

A. RENAME

B. INSERT

C. DESCRIBE

D. DELETE

E. UPDATE

F. SELECT

QUESTION NO: 21

Examine the SQL statement that creates ORDERS table:

```
CREATE TABLE orders
(SER_NO NUMBER UNIQUE,
ORDER_ID NUMBER,
ORDER_DATE DATE NOT NULL,
STATUS VARCHAR2(10)
CHECK (status IN ('CREDIT', 'CASH')),
PROD_ID NUMBER
REFERENCES PRODUCTS(PRODUCT_ID),
ORD_TOTAL NUMBER,
PRIMARY KEY (order_id, order_date));
```

For which columns would an index be automatically created when you execute the above SQL statement? (Choose two).

A. ORDER_ID

B. SER_NO

C. PROD_ID

D. ORD_TOTAL

E. composite index on ORDER_ID and ORDER_DATE

F. STATUS

QUESTION NO: 22

The EMP table contains these columns:

EMPLOYEE_ID NUMBER(4)
EMPNAME VARCHAR2 (25)
SALARY NUMBER(9,2)
HIRE_DATE DATE

You query the database with this SQL statement:

```
SELECT empname,hire_date HIREDATE, salary
FROM EMP
ORDER BY hire_date;
```

How will the results be sorted?

A. descending alphabetically

B. descending by date

C. randomly

D. ascending by date

E. ascending alphabetically

QUESTION NO: 23

Which SQL statement defines a FOREIGN KEY constraint on the DEPTNO column of the EMP table?

A. CREATE TABLE EMP
(empno NUMBER(4),
ename VARCHAR2(35),
deptno NUMBER(7,2) NOT NULL,
CONSTRAINT emp_deptno_fk REFERENCES dept (deptno)
FOREIGN KEY (deptno));

B. CREATE TABLE EMP
(empno NUMBER(4),
ename VARCHAR2(35),
deptno NUMBER(7,2) NOT NULL,
CONSTRAINT emp_deptno_fk FOREIGN KEY deptno
REFERENCES dept deptno);

C. CREATE TABLE EMP
(empno NUMBER(4),
ename VARCHAR2(35),
deptno NUMBER(7,2) FOREIGN KEY
CONSTRAINT emp_deptno_fk REFERENCES dept (deptno));

D. CREATE TABLE EMP
(empno NUMBER(4),
ename VARCHAR2(35),
deptno NUMBER(7,2)
CONSTRAINT emp_deptno_fk REFERENCES dept (deptno));

QUESTION NO: 24

Which two statements are true about WHERE and HAVING clauses? (Choose two).

A. A WHERE clause CANNOT be used in a query if the query uses a HAVING clause.

B. A HAVING clause CANNOT be used in subqueries.

C. A WHERE clause can be used to restrict both rows and groups.

D. A HAVING clause can be used to restrict both rows and groups.

E. A WHERE clause can be used to restrict rows only.

F. A HAVING clause can be used to restrict groups only.

QUESTION NO: 25

Examine the description of the STUDENTS table:

STD_ID NUMBER(4)
COURSE_ID VARCHAR2(10)
START_DATE DATE
END_DATE DATE

Which two aggregate functions are valid on the START_DATE column? (Choose two).

A. MIN(start_date)

B. SUM(start_date)

C. COUNT(start_date)

D. MAXIMUM(start_date)

E. AVG(start_date)

F. AVG(start_date, end_date)