

Group Functions Exam

Q1: Examine the description of the EMPLOYEES table.

EMP_ID NUMBER(4) NOT NULL

LAST_NAME VARCHAR2(30) NOT NULL

FIRST_NAME VARCHAR2(30)

DEPT_ID NUMBER(2)

JOB_CAT VARCHAR2(30)

SALARY NUMBER(8,2)

Which statement shows the maximum salary paid in each job category of each department?

- A. SELECT dept_id, job_cat, MAX(salary)
FROM employees
WHERE salary > MAX (salary);
 - B. SELECT dept_id, job_cat, MAX(salary) FROM employees
GROUP BY dept_id,job_cat;
 - C. SELECT dept_id, job_cat, MAX(salary) FROM employees;
 - D. SELECT dept_id, job_cat, MAX(salary)
FROM employees GROUP BY dept_id;
 - E. SELECT dept_id, job_cat, MAX(salary) FROM employees
GROUP BY dept _ id job _ cat salary;
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Q2: 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. SUM(start_date)
- B. AVG(start_date)
- C. COUNT(start_date)
- D. AVG(start_date, end_date)

E. MIN(start_date)

F. MAXIMUM(start_date)

Q3: Examine the description of the MARKS table.

STD_ID NUMBER(4)

STUDENT_NAME VARCHAR2(30)

SUBJ1 NUMBER(3)

SUBJ2 NUMBER(3)

SUBJ1 and SUBJ2 indicate the marks obtained by a student in two subjects.

Examine this SELECT statement based on the MARKS table.

```
SELECT subj1+subj2 total_marks, std_id
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FROM marks
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```
WHERE subj1 > AVG(subj1) AND subj2 > AVG(subj2)
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```
ORDER BY total_marks;
```

What is the result of the SELECT statement?

- A. The statement executes successfully and returns the student ID and sum of all marks for each student who obtained more than the average mark in each subject.
- B. The statement returns an error at the SELECT clause.
- C. The statement returns an error at the WHERE clause.
- D. The statement returns an error at the ORDER BY clause.

Q4: Examine the description of the EMPLOYEES table.

EMP_ID NUMBER(4) NOT NULL

LAST_NAME VARCHAR2(30) NOT NULL

FIRST_NAME VARCHAR2(30)

DEPT_ID NUMBER(2)

JOB_CAT VARCHAR2(30)

SALARY NUMBER(8,2)

Which statement shows the department ID, minimum salary, and maximum salary paid in that department, only of the minimum salary is less than 5000 and the maximum salary is more than 15000?

- A. SELECT dept_id, MIN(salary), MAX(salary)
FROM employees

WHERE MIN(salary) < 5000 AND MAX (salary) > 15000;

- B.** SELECT dept_id, MIN(salary),
MAX(salary)
FROM employees
WHERE MIN(salary) < 5000 AND MAX(salary) > 15000
GROUP BY dept_id;
- C.** SELECT dept_id, MIN(salary),
MAX(salary)
FROM employees
HAVING MIN(salary) < 5000 AND MAX (salary) > 15000;
- D.** SELECT dept_id,
MIN(salary), MAX(salary)
FROM employees
GROUP BY dept_id
HAVING MIN (salary) < 5000 AND MAX(salary)
- E.** SELECT dept_id, MIN(salary), MAX(salary)
FROM employees
GROUP BY dept_id, salary
HAVING MIN (salary) < 5000 AND MAX (salary) > 15000;

Q5: The STUDENT_GRADES table has these columns.

STUDENT_ID NUMBER(12)

SEMESTER_END DATE

GPA NUMBER(4,3)

The registrar has asked for a report on the average grade point average (GPA) for students enrolled during semesters that end in the year 2000.

Which statement accomplish this?

- A.** SELECT AVERAGE(gpa)
FROM student_grades
WHERE semester _ end > '01-JAN-2000' and semester end < '31-DEC-2000';
- B.** SELECT COUNT(gpa) FROM student grades

WHERE semester _ end > '01-JAN-2000' and semester end <31-DEC-2000';

C. SELECT MIN(gpa) FROM student grades

WHERE semester _ end > '01-JAN-2000' and semester end <31-DEC-2000';

D. SELECT AVG(gpa)

FROM student_grades

WHERE semester _ end BETWEEN '01-JAN-2000' and '31-DEC-2000';

E. SELECT SUM(gpa) FROM student grades

WHERE semester _ end > '01-JAN-2000' and semester end <31-DEC-2000';

F. SELECT MEDIAN(gpa) FROM student_grades

WHERE semester _ end > '01-JAN-2000' and semester end <31-DEC-2000';

Q6: Which two are true about aggregate functions? **(Choose two.)**

- A. You can use aggregate functions in any clause of a SELECT statement.
- B. You can use aggregate functions only in the column list of the SELECT clause and in the WHERE clause of a SELECT statement.
- C. You can mix single row columns with aggregate functions in the column list of a SELECT statement by grouping on the single row columns.
- D. You can pass column names, expressions, constants, or functions as parameters to an aggregate function.
- E. You can use aggregate functions on a table, only by grouping the whole table as one single group.
- F. You cannot group the rows of a table by more than one column while using aggregate functions.

Q7: In a SELECT statement that includes a WHERE clause, where is the GROUP BY clause placed in the SELECT statement?

- A. Immediately after the SELECT clause
- B. Before the WHERE clause
- C. Before the FROM clause

- D. After the ORDER BY clause
- E. After the WHERE clause

Q8: The EMP table has these columns.

ENAME VARCHAR2(35)

SALARY NUMBER(8,2)

HIRE_DATE DATE

Management wants a list of names of employees who have been with the company for more than five years.

Which SQL statement displays the required results?

- A. SELECT ENAME FROM EMP WHERE SYSDATE-HIRE_DATE >5;
 - B. SELECT ENAME FROM EMP WHERE HIRE_DATE-SYSDATE >5;
 - C. SELECT ENAME FROM EMP WHERE (SYSDATE-HIRE_DATE)/365 >5;
 - D. SELECT ENAME FROM EMP WHERE (SYSDATE-HIRE_DATE)*365 >5;
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Q9: 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)

The CUSTOMER_ID column is the primary key for the table.

Which two statements find the number of customers? **(Choose two.)**

- A. SELECT TOTAL(*)FROM customer;
- B. SELECT COUNT(*) FROM customer;
- C. SELECT TOTAL(customer_id) FROM customer;
- D. SELECT COUNT(customer_id) FROM customer;
- E. SELECT COUNT(customers) FROM customer;

F. SELECT TOTAL(customer_name) FROM customer;

Q10: Which clause would you use in a SELECT statement to limit the display to those employees whose salary is greater than 5000?

- A. ORDER BY SALARY > 5000
 - B. GROUP BY SALARY > 5000
 - C. HAVING SALARY > 5000
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Q11: You need to calculate the total of all salaries in the accounting department.

Which group function should you use?

- A. MAX
 - B. MIN
 - C. SUM
 - D. COUNT
 - E. TOTAL
 - F. LARGEST
-

Q12: Which clause should you use to exclude group results?

- A. WHERE
 - B. HAVING
 - C. RESTRICT
 - D. GROUP BY
 - E. ORDER BY
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Q13: Which two statements are true about WHERE and HAVING clauses?
(Choose two)

- A. A WHERE clause can be used to restrict both rows and groups.
- B. A WHERE clause can be used to restrict rows only.
- C. A HAVING clause can be used to restrict both rows and groups.
- D. A HAVING clause can be used to restrict groups only.
- E. A WHERE clause CANNOT be used in a query of the query uses a HAVING clause.

F. A HAVING clause CANNOT be used in subqueries.

Q14: 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)

The CUSTOMER_ID column is the primary key for the table.

You need to determine how dispersed your customer base is.

Which expression finds the number of different countries represented in the CUSTOMERS table?

- A. COUNT(UPPER(country_address))
- B. COUNT(DIFF(UPPER(country_address)))
- C. COUNT(UNIQUE(UPPER(country_address)))
- D. COUNT DISTINCTC UPPER(country_address)
- E. COUNT(DISTINTC (UPPER(country_address)))

Q15: Examine the structure of the EMP_DEPT_VU view. Column Name Type Remarks

EMPLOYEE_ID NUMBER From the EMPLOYEES table EMP_NAME VARCHAR2(30)
From the EMPLOYEES table JOB_ID VARCHAR2(20) From the EMPLOYEES table
SALARY NUMBER From the EMPLOYEES table DEPARTMENT_ID NUMBER From the
DEPARTMENTS table DEPT_NAME VARCHAR2(30) From the DEPARTMENTS table.

Which SQL statement produces an error?

- A. SELECT * FROM emp_dept_vu;
- B. SELECT department_id, SUM(salary)
FROM emp_dept_vu
GROUP BY department _ id;
- C. SELECT department_id, job_id, AVG(salary)
FROM emp_dept_vu
GROUP BY department _ id, job_id;

D. SELECT job_id, SUM(salary) FROM emp_dept_vu
WHERE department_id IN (10,20)
GROUP BY job_id
HAVING SUM (salary) > 20000

Q16: Examine the description of the EMPLOYEES table.

EMP_ID NUMBER(4) NOT NULL
LAST_NAME VARCHAR2(30) NOT NULL
FIRST_NAME VARCHAR2(30)
DEPT_ID NUMBER(2)

Which statement produces the number of different departments that have employees with last name Smith?

- A.** SELECT COUNT (*) FROM employees WHERE last _name='smith';
 - B.** SELECT COUNT (dept_id) FROM employees WHERE last _name='smith';
 - C.** SELECT DISTINCT (COUNT (dept_id) FROM employees WHERE last _name='smith';
 - D.** SELECT COUNT (DISTINCT dept_id) FROM employees WHERE last _name='smith';
 - E.** SELECT UNIQUE (dept_id) FROM employees WHERE last _name='smith';
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Q17: What is true of using group functions on columns that contain NULL values?

- A.** Group functions on columns ignore NULL values.
 - B.** Group functions on columns returning dates include NULL values.
 - C.** Group functions on columns returning numbers include NULL values.
 - D.** Group functions on columns cannot be accurately used on columns that contain NULL values.
 - E.** Group functions on columns include NULL values in calculations if you use the keyword INC_NULLS.
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Q18: The STUDENT_GRADES table has these columns.

STUDENT_ID NUMBER(12)

SEMESTER_END DATE

GPA NUMBER(4,3)

Which statement finds the highest grade point average (GPA) per semester?

- A. SELECT MAX (gpa) FROM student _ grades WHERE gpa IS NOT NULL;
 - B. SELECT (gpa) FROM student _ grades GROUP BY semester_end WHERE gpa IS NOT NULL;
 - C. SELECT MAX (gpa) FROM student _ grades WHERE gpa IS NOT NULL GROUP BY semester_end;
 - D. SELECT MAX (gpa) GROUP BY semester_end WHERE gpa IS NOT NULL FROM student _ grades;
 - E. SELECT MAX (gpa) FROM student _ grades GROUP BY semester_end WHERE gpa IS NOT NULL;
-

Q19: 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(*) FROM customers WHERE city _ address IN ('Los Angeles','San Fransisco');

B. SELECT city_address, COUNT (*) FROM customers
WHERE city address IN ('Los Angeles', 'San Fransisco')
GROUP BY city_address;

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

D. SELECT city_address, COUNT (customer_id)
FROM customers
GROUP BY city_ address IN ('Los Angeles','San Fransisco');

Q20: Which two are true about aggregate functions? **(Choose two.)**

- A.** You can use aggregate functions in any clause of a SELECT statement.
- B.** You can use aggregate functions only in the column list of the select clause and in the WHERE clause of a SELECT statement.
- C.** You can mix single row columns with aggregate functions in the column list of a SELECT statement by grouping on the single row columns.
- D.** You can pass column names, expressions, constants, or functions as parameter to an aggregate function.
- E.** You can use aggregate functions on a table, only by grouping the whole table as one single group.
- F.** You cannot group the rows of a table by more than one column while using aggregate functions.

With My Best Wishes

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