



**Warszawska  
Wyższa Szkoła  
Informatyki**

# **Koło Naukowe TechOr**

## **testy kwalifikacyjne**

## Question No: 1

---

**Examine the structure of the EMPLOYEES table:**

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

**Which three statements inserts a row into the table?**

A. INSERT INTO employees

VALUES ( NULL, 'John','Smith');

B. INSERT INTO employees( first\_name, last\_name)

VALUES('John','Smith');

C. INSERT INTO employees

VALUES ('1000','John',NULL);

D. INSERT INTO employees(first\_name,last\_name, employee\_id)

VALUES ( 1000, 'John','Smith');

E. INSERT INTO employees (employee\_id)

VALUES (1000);

F. INSERT INTO employees (employee\_id, first\_name, last\_name)

VALUES ( 1000, 'John','');



## Question No: 2

---

**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	VARCHARD2(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;



### Question No: 3

---

Management has asked you to calculate the value  $12 * \text{salary} * \text{commission\_pct}$  for all the employees in the EMP table. The EMP table contains these columns:

LAST NAME	VARCHAR2(35)	NOT NULL
SALARY	NUMBER(9,2)	NOT NULL
COMMISSION_PCT	NUMBER(4,2)	

Which statement ensures that a value is displayed in the calculated columns for all employees?

- A. `SELECT last_name, 12*salary* commission_pct  
FROM emp;`
- B. `SELECT last_name, 12*salary* (commission_pct,0)  
FROM emp;`
- C. `SELECT last_name, 12*salary*(nvl(commission_pct,0))  
FROM emp;`
- D. `SELECT last_name, 12*salary*(decode(commission_pct,0))  
FROM emp;`



## Question No: 4

---

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?

- 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)



## Question No: 5

---

The **EMPLOYEE** table has these columns:

```
LAST_NAME      VARCHAR2(35)
SALARY         NUMBER(8,2)
COMMISSION_PCT NUMBER(5,2)
```

You want to display the name and annual salary multiplied by the `commission_pct` for all employees. For records that have a `NULL` `commission_pct`, a zero must be displayed against the calculated column.

Which SQL statement displays the desired results?

- A. `SELECT last_name, (salary * 12) * commission_pct  
FROM EMPLOYEES;`
- B. `SELECT last_name, (salary * 12) * IFNULL(commission_pct, 0)  
FROM EMPLOYEES;`
- C. `SELECT last_name, (salary * 12) * NVL2(commission_pct, 0)  
FROM EMPLOYEES;`
- D. `SELECT last_name, (salary * 12) * NVL(commission_pct, 0)  
FROM EMPLOYEES;`



## Question No: 6

---

### Evaluate the SQL statement:

```
1 SELECT a.emp_name, a.sal, a.dept_id, b.maxsal
2 FROM employees a,
3 (SELECT dept_id, MAX(sal) maxsal
4 FROM employees
5 GROUP BY dept_id) b
6 WHERE a.dept_id = b.dept_id
7 AND a.sal < b.maxsal;
```

### What is the result of the statement?

- A. The statement produces an error at line 1.
- B. The statement produces an error at line 3.
- C. The statement produces an error at line 6.
- D. The statement returns the employee name, salary, department ID, and maximum salary earned in the department of the employee for all departments that pay less salary than the maximum salary paid in the company.
- E. The statement returns the employee name, salary, department ID, and maximum salary earned in the department of the employee for all employees who earn less than the maximum salary in their department



## Question No: 7

---

**Evaluate the set of SQL statements:**

```
CREATE TABLE dept
(deptno          NUMBER(2),
dname           VARCHAR2(14),
loc VARCHAR2(13));
ROLLBACK;
DESCRIBE DEPT
```

**What is true about the set?**

- A. The DESCRIBE DEPT statement displays the structure of the DEPT table.
- B. The ROLLBACK statement frees the storage space occupies by the DEPT table.
- C. The DESCRIBE DEPT statement returns an error ORA-04043: object DEPT does not exist.
- D. The DESCRIBE DEPT statement displays the structure of the DEPT table only if there is a COMMIT statement introduced before the ROLLBACK statement.





## Question No: 8

---

**The EMP table contains these columns:**

LAST NAME	VARCHAR2(25)
SALARY	NUMBER(6,2)
DEPARTMENT_ID	NUMBER(6)

**You need to display the employees who have not been assigned to any department.**

**You write the SELECT statement:**

```
SELECT LAST_NAME, SALARY, DEPARTMENT_ID
FROM EMP
WHERE DEPARTMENT_ID = NULL;
```

**What is true about this SQL statement?**

- A. The SQL statement displays the desired results.
- B. The column in the WHERE clause should be changed to display the desired results.
- C. The operator in the WHERE clause should be changed to display the desired results.
- D. The WHERE clause should be changed to use an outer join to display the desired results.



## Question No: 9

---

**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
```

```
FROM marks
```

```
WHERE subj1 > AVG(subj1) AND subj2 > AVG(subj2)
```

```
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.



## Question No: 10

---

You want to display the titles of books that meet these criteria:

1. Purchased before January 21, 2001
2. Price is less then \$500 or greater than \$900

You want to sort the results by their data of purchase, starting with the most recently bought book.

Which statement should you use?

A. SELECT book\_title  
FROM books  
WHERE price between 500 and 900  
AND purchase\_date < '21-JAN-2001'  
ORDER BY purchase\_date;

B. SELECT book\_title  
FROM books  
WHERE price IN (500,900)  
AND purchase\_date < '21-JAN-2001'  
ORDER BY purchase date ASC;

C. SELECT book\_title  
FROM books  
WHERE price < 500 or > 900  
AND purchase\_date < '21-JAN-2001'  
ORDER BY purchase date DESC;

D. SELECT book\_title  
FROM books  
WHERE (price < 500 OR price > 900)  
AND purchase\_date < '21-JAN-2001'  
ORDER BY purchase date DESC;

## Question No: 11

---

**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 then 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) < 15000

## Question No: 12

---

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



## Question No: 13

---

**What is necessary for your query on an existing view to execute successfully?**

- A. The underlying tables must have data.
- B. You need SELECT privileges on the view.
- C. The underlying tables must be in the same schema.
- D. You need SELECT privileges only on the underlying tables.



## Question No: 14

---

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;

## Question No: 15

Examine the data in the EMPLOYEES table.

EMP_ID	EMP_NAME	DEPT_ID	MGR_ID	JOB_ID	SALARY
101	Smith	20	120	SA_REP	4000
102	Martin	10	105	CLERK	2500
105	Diana	30	108	IT_ADMIN	5000
106	Smith	40	110	AD.ASST	3000
108	Jennifer	30	110	HR_DIR	6500
110	Bob	40		EK_DIR	8000
120	Revi	20	110	SA_DIR	6500

On the EMPLOYEES table, EMPLOYEE\_ID is the primary key. MGR\_ID is the ID of managers and refers to the EMPLOYEE\_ID. The JOB\_ID column is a NOT NULL column.

Evaluate this DELETE statement:

```
DELETE employee_id, salary, job_id
FROM employees
WHERE dept_id = 90;
```

**Why does the DELETE statement fail when you execute it?**

- A. There is no row with dept\_id 90 in the EMPLOYEES table.
- B. You cannot delete the JOB\_ID column because it is a NOT NULL column.
- C. You cannot specify column names in the DELETE clause of the DELETE statement.
- D. You cannot delete the EMPLOYEE\_ID column because it is the primary key of the table.



## Question No: 16

---

**Evaluate these two SQL statements:**

```
SELECT last_name, salary , hire_date
FROM EMPLOYEES
ORDER BY salary DESC;
SELECT last_name, salary, hire_date
FROM EMPLOYEES
ORDER BY 2 DESC;
```

**What is true about them?**

- A. The two statements produce identical results.
- B. The second statement returns a syntax error.
- C. There is no need to specify DESC because the results are sorted in descending order by default.
- D. The two statements can be made to produce identical results by adding a column alias for the salary column in the second SQL statement.



## Question No: 17

---

The **CUSTOMERS** table has these columns:

CUSTOMER_ID	NUMBER(4) NOT NULL
CUSTOMER_NAME	VARCHAR2(100) NOT NULL
ADDRESS	VARCHAR2(250)
POSTAL_CODE	VARCHAR2(12)
CUSTOMER_PHONE	VARCHAR2(20)

Which statement finds the rows in the **CUSTOMERS** table that do not have a postal code?

A. SELECT customer\_id, customer\_name  
FROM customers  
WHERE postal\_code CONTAINS NULL;

B. SELECT customer\_id, customer\_name  
FROM customers  
WHERE postal\_code = '\_\_\_\_\_';

C. SELECT customer\_id, customer\_name  
FROM customers  
WHERE postal\_code IS NULL;

D. SELECT customer\_id, customer\_name  
FROM customers  
WHERE postal code IS NVL;

E. SELECT customer\_id, customer\_name  
FROM customers  
WHERE postal\_code = NULL;



## Question No: 18

---

**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?**

- |   |   |
|---|---|
| A. SELECT TOTAL(*)<br>FROM customers;           | D. SELECT COUNT(customer_id)<br>FROM customers;   |
| B. SELECT COUNT(*)<br>FROM customers;           | E. SELECT COUNT(customers)<br>FROM customers;     |
| C. SELECT TOTAL(customer_id)<br>FROM customers; | F. SELECT TOTAL(customer_name)<br>FROM customers; |



Which two statements are true regarding the ORDER BY clause?

- A. The sort is in ascending by order by default.
- B. The sort is in descending order by default.
- C. The ORDER BY clause must precede the WHERE clause.
- D. The ORDER BY clause is executed on the client side.
- E. The ORDER BY clause comes last in the SELECT statement.
- F. The ORDER BY clause is executed first in the query execution



## Question No: 20

---

Which operator can be used with a multiple-row subquery?

A. =

B. LIKE

C. BETWEEN

D. NOT IN

E. IS

F. <>



## Question No: 21

---

You need to display the last names of those employees who have the letter "A" as the second character in their names.

**Which SQL statement displays the required results?**

A. SELECT last\_name  
FROM EMP  
WHERE last\_name LIKE '\_A%';

B. SELECT last\_name  
FROM EMP  
WHERE last name = '\*A%'

C. SELECT last\_name  
FROM EMP  
WHERE last name = '\_A%';

D. SELECT last\_name  
FROM EMP  
WHERE last name LIKE '\*A%'



## Question No: 22

---

Which two are character manipulation functions?

- A. TRIM
- B. REPLACE
- C. TRUNC
- D. TO\_DATE
- E. MOD
- F. CASE



## Question No: 23

---

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





## Question No: 24

---

Which constraint can be defines only at the column level?

- A. UNIQUE
- B. NOT NULL
- C. CHECK
- D. PRIMARY KEY
- E. FOREIGN KEY



## Question No: 25

---

The database administrator of your company created a public synonym called HR for the HUMAN\_RESOURCES table of the GENERAL schema, because many users frequently use this table.

As a user of the database, you created a table called HR in your schema.

What happens when you execute this query?

```
SELECT *  
FROM HR;
```

- A. You obtain the results retrieved from the public synonym HR created by the database administrator.
- B. You obtain the results retrieved from the HR table that belongs to your schema.
- C. You get an error message because you cannot retrieve from a table that has the same name as a public synonym.
- D. You obtain the results retrieved from both the public synonym HR and the HR table that belongs to your schema, as a Cartesian product.
- E. You obtain the results retrieved from both the public synonym HR and the HR table that belongs to your schema, as a FULL JOIN.



## Question No: 26

---

You need to modify the **STUDENTS** table to add a primary key on the **STUDENT\_ID** column. The table is currently empty.

Which statement accomplishes this task?

- A. ALTER TABLE students  
ADD PRIMARY KEY student\_id;
- B. ALTER TABLE students  
ADD CONSTRAINT PRIMARY KEY (student\_id);
- C. ALTER TABLE students  
ADD CONSTRAINT stud\_id\_pk PRIMARY KEY student\_id;
- D. ALTER TABLE students  
ADD CONSTRAINT stud\_id\_pk PRIMARY KEY (student\_id);
- E. ALTER TABLE students  
MODIFY CONSTRAINT stud\_id\_pk PRIMARY KEY (student\_id);



## Question No: 27

---

Evaluate the SQL statement:

```
SELECT ROUND(TRUNC(MOD(1600,10),-1),2)
FROM dual;
```

What will be displayed?

- A. 0
- B. 1
- C. 0.00
- D. An error statement



## Question No: 28

---

For which two constraints does the Oracle Server implicitly create a unique index?

- A. NOT NULL
- B. PRIMARY KEY
- C. FOREIGN KEY
- D. CHECK
- E. UNIQUE



## Question No: 29

---

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';



## Question No: 30

---

The **ORDERS** table has these columns:

ORDER\_ID NUMBER(4) NOT NULL  
CUSTOMER\_ID NUMBER(12) NOT NULL  
ORDER\_TOTAL NUMBER(10,2)

The **ORDERS** table tracks the Order number, the order total, and the customer to whom the Order belongs. Which two statements retrieve orders with an inclusive total that ranges between 100.00 and 2000.00 dollars?

A. SELECT customer\_id, order\_id, order\_total  
FROM orders  
RANGE ON order\_total (100 AND 2000) INCLUSIVE;

B. SELECT customer\_id, order\_id, order\_total  
FROM orders  
HAVING order\_total BETWEEN 100 and 2000;

C. SELECT customer\_id, order\_id, order\_total  
FROM orders  
WHERE order\_total BETWEEN 100 and 2000;

D. SELECT customer\_id, order\_id, order\_total  
FROM orders  
WHERE order\_total >= 100 and <= 2000;

E. SELECT customer\_id, order\_id, order\_total  
FROM orders  
WHERE order\_total >= 100 and order\_total <= 2000;