Oracle

SQL Exercises

Please read the given table structures and data in them. Answer the following questions.

Table : Studies

NAME	NULL	TYPE	Description of Column
PNAME	NOT NULL	VARCHAR2(20)	NAME
SPLACE	NOT NULL	VARCHAR2(20)	STUDIED PLACE
COURSE	NOT NULL	VARCHAR2(20)	COURSE STUDIED

TABLE : SOFTWARE

NAME	NULL ?	TYPE	Description of column
PNAME	NOT NULL	VARCHAR2(20)	NAME
TITLE	NOT NULL	VARCHAR2(20)	DEVELOPED PROJECT NAME
DEV_IN	NOT NULL	VARCHAR2(10)	LANGUAGE DEVELOPED
SCOST		NUMBER(7,2)	SOFTWARE COST
DCOST		NUMBER(7,2)	DEVELOPMENT COST
SOLD		NUMBER(4)	NO OF SOFTWARE SOLD

Data in Table : STUDIES

PNAME	SPLACE	COURSE	COST
ANAND	SABHARI	PGDCA	45000
ALTAF	COIT	DCA	7200
JULIANA	BITS	MCA	22000
KAMALA	PRAGATHI	DCP	5000
MARY	SABHARI	PGDCA	4600
NELSON	PRAGATHI	DAP	6200
PATRICK	SABHARI	DCA	5200
QADIR	APPLE	HDCP	14000
RAMESH	SABHARI	PGDCA	4500
REBECCA	BPILLANI	DCA	11000
REMITHA	BDPS	DCS	6000
REVATHI	SABHARI	DAP	5000
VIJAYA	BDPS	DCA	48000

TABLE : SOFTWARE

PNAME	TITLE	DEV_IN	SCOST	DCOST	SOLD
ANAND	PARACHUTES	BASIC	399	6000	43
ANAND	VIDEO TITLING PACK	PASCAL	7500	16000	9
JULIANA	INVENTORY CONTROL	COBOL	3000	3500	0
KAMALA	PAYROLL PACKAGE	DBASE	9000	20000	7
MARY	FINANCIAL ACC.S/W	ORACLE	18000	85000	4
PATRICK	CODE GENERATION	COBOL	4500	20000	23
QADIR	READ ME	C++	300	1200	84
QADIR	BOMBS AWAY	ASSEMBLY	750	5000	11
QADIR	VACCINES	C	1900	3400	21
RAMESH	HOTEL MANAGEMENT	DBASE	12000	3500	4
RAMESH	DEAD LEE	PASCAL	599	4500	73
REMITHA	PC UTILITIES	C	725	5000	51
REMITHA	TSR HELP PACKAGE	ASSEMBLY	2500	6000	6
REVATHI	HOSPITAL MANAGEMENT	PASCAL	1100	75000	2
REVATHI	QUIZ MASTER	BASIC	3200	2100	15
VIJAYA	ISR EDITION	C	900	700	6

Data in Table : PROGRAMMER

PNAME	DOB	DOJ	SEX	PROF1	PROF2	SALARY
ANAND	21-APR-66	21-APR-92	M	PASCAL	BASIC	3200
ALTAF	02-JUL-64	13-NOV-90	M	CLIPPER	COBOL	2800
JULIANA	31-JAN-68	21-APR-90	F	COBOL	DBASE	3000
KAMALA	30-OCT-68	02-JAN-92	F	C	DBASE	2900
MARY	24-JUN-70	01-FEB-91	F	C++	ORACLE	4500
NELSON	11-SEP-85	11-OCT-89	M	COBOL	DBASE	2500
PATRICK	10-NOV-65	21-APR-90	M	PASCAL	CLIPPER	2800
QADIR	31-AUG-65	21-APR-91	M	ASSEMBLY	C	3000
RAMESH	03-MAY-67	28-FEB-91	M	PASCAL	DBASE	3200
REBECCA	01-JAN-67	01-DEC-90	F	BASIC	COBOL	2500
REMITHA	19-APR-70	20-APR-93	F	C	ASSEMBLY	3600
REVATHI	02-DEC-69	02-JAN-92	F	PASCAL	BASIC	3700
VIJAYA	14-DEC-65	02-MAY-92	F	FOXPRO	C	3500

QUERY – I

- Find out the selling cost average for packages developed in pascal.

- Display the names and ages of all the programmers

- Display the names of those who have done the DAP course

- What is the highest number of copies sold by a package

- Display the names and date of birth of all programmers born in January

- Display the lowest course fee

- How many programmers have done the PGDCA course

- How much revenue has been earned through sale of packages developed in C

- Display the software's developed by Ramesh

- How many programmers studied at Sabhari?

- Display the details of the packages whose sales crossed 2000 mark.

- Find out the number of copies which should be sold in order to recover the development cost of each package.

- Display the details of packages for which development cost have been recovered.

- What is the price of the costliest software developed in BASIC

- How many packages were developed in DBASE?

- How many programmers studied at Pragathi?

- How many programmers paid 5000 to 10000 for their course?

- What is the average course fee?

- Display the details of programmers knowing C

- How many programmers know either COBOL or PASCAL?

- How many programmers don't know PASCAL and C?

- How old is the oldest male programmer?

- What is the average age of female programmers?

- Calculate the experience in years for each programmer and display along with the names, in descending order.

- Who are the programmers who celebrate their birthday's during the current month?

- How many female programmers are there?

- What are the languages known by the male programmers

- What is the average salary

- How many people draw 2000 to 4000?

- Display the details of those who don't know Clipper, COBOL or Pascal

- Display the details of those who will be completing 2 years of services this year?

- Calculate the amount to be recovered for those packages whose development cost has not yet been recovered?

- List the packages, which have not been sold so far?

- Find out the cost of the software developed by Mary?

- Display the institute names from the studies table without the duplicates

- How many different courses are mentioned in the studies table?

- Display the names of the programmers whose names contain 2 occurrences of the letter 'A'

- Display the names of the programmers whose names contains 5 characters

- How many female programmers knowing COBOL have more than 2 yrs experience

- What is the length of the shortest name in the programmer table

- What is the average development cost of a package developed in COBOL

- Display the name,sex, dob(dd/mm/yy format) , DOJ(dd/mm/yy format) for all the programmers

- What is the amount paid in salaries of the male programmers who don't know COBOL

- Display the title , scost, dcost and difference between scost and dcost in descending order of difference

- Display the names of the packages whose names contain more than 1 word

- Display the name, dob, doj of those month of birth and month of joining are same

QUERY – II

- Display the cost of the package developed by each programmer

- Display the sales values of the packages developed by the each programmer

- Display the number of packages sold by each programmer

- Display the sales cost of the packages developed by each programmer

- Display each language name with average development cost, average selling cost and average price per copy

- Display each programmer's name, costliest package and cheapest packages developed by him / her.

- Display each institute name with number of courses , average cost per course

- Display each Institute name with number of students

- Display the names of male and female programmers

- Display the programmer's name and their packages

- Display the number of packages in each language except C and C++

- Display the number of packages in each language for which development cost is less than 1000

- Display the average difference between SCOST and DCOST for each language

- Display the total SCOST, DCOST and amount to be recovered for each programmer for those whose dcost has not yet been recovered

- Display the highest, lowest and average salaries for those earning more than 2000

QUERY – III

- Who is the most experienced programmer knowing pascal?

- Which course has been done by the most of the students?

- Which course has the lowest selling cost?

- Display the courses whose fees are within 1000/- (+ or -) of the average fee

- Who developed the package that has sold the least number of copies

- Which language was used to develop most number of packages

- Display the names of the packages which have been sold less than the average number of copies

- Who is the youngest male programmer born in 1965

- In which year most number of programmers born

- Which female programmer earning more than 3000/- does not know C,C++, ORACLE OR DBASE

- Which programmer has developed highest no of packages

- Who are the male programmers earning below the average salary of female programmers

- Display the details of those who are drawing salary

- Display the details of the software developed by the male programmers earning more than 3000

- Display the details of the software developed in C by female programmers of Pragathi

- How many months it will take for each programmer to recover their cost of study

- Display the details of the software developed in the language which is not the programmers first proficiency

- Display the details of the software developed in the language which is neither the first nor second proficiency of the programmer

- Who are the programmers who joined in the same day

- Display the programmers who are drawing same salary

- Which is the costliest package developed by a person with under 3 years experience

- What is the average salary for those whose software sales value is more than 50,000

- How many packages were developed by the person who developed the cheapest package . Where did he / she study.

- How many packages developed by female programmers earning more than the highest paid male programmer

- How many packages were developed by the most experienced programmer from BDPS

QUERY - IV

➢ Write a query to display the last name, department number, and salary of any employee whose department number and salary both match the department number and salary of any employee who earns a commission.

➢ Display the last name, department name, and salary of any employee whose salary and commission match the salary and commission of any employee located in location ID 1700.

➢ Create a query to display the last name, hire date, and salary for all employees who have the same salary and commission as Kochhar.

  Note: Do not display Kochhar in the result set.

➢ Create a query to display the employees who earn a salary that is higher than the salary of all of the sales managers (JOB_ID = 'SA_MAN'). Sort the results on salary from highest to lowest.

➢ Find all employees who are not supervisors.

  o First do this using the NOT EXISTS operator
  o Can this be done by using the NOT IN operator? How, or why not?

➢ Write a query to display the last names of the employees who earn less than the average salary in their departments.

➢ Write a query to display the last names of the employees who have one or more coworkers in their departments with later hire dates but higher salaries.

➢ Write a query to display the department names of those departments whose total salary cost is above one eighth (1/8) of the total salary cost of the whole company

➢ Write a query to display the last name, department number, and department name for all employees

➢ Create a unique listing of all jobs that are in department 80. Include the location of the department in the output.

➢ Write a query to display the employee last name, department name, location ID, and city of all employees who earn a commission.

➢ Display the employee last name and department name for all employees who have an a (lowercase) in their last names

➢ Write a query to display the last name, job, department number, and department name for all employees who work in Toronto.

➢ display all employees including King, who has no manager. Order the results by the employee number.

➢ Create a query that displays employee last names, department numbers, and all the

employees who work in the same department as a given employee. Give each column an appropriate label.

➢ Show the structure of the JOB_GRADES table. Create a query that displays the name, job, department name, salary, and grade for all employees.

➢ Create a query to display the name and hire date of any employee hired after employee Davies.

➢ Write a query to display the following for those employees whose manager ID is less than 120:

- Manager ID
- Job ID and total salary for every job ID for employees who report to the same manager
- Total salary of those managers
- Total salary of those managers, irrespective of the job IDs

Question: 1

Which SELECT statement should you use if you want to display unique combinations of the POSITION and MANAGER values from the EMPLOYEE table?

1. SELECT DISTINCT position, manager FROM employee;
2. SELECT position, manager DISTINCT FROM employee;
3. SELECT position, manager FROM employee;
4. SELECT position, DISTINCT manager FROM employee;

Question: 2

You need to produce a report for mailing labels for all customers. The mailing label must have only the customer name and address. The CUSTOMERS table has these columns:

CUST_ID	NUMBER(4)	NOT NULL
CUST_NAME	VARCHAR2(100)	
CUST_ADDRESS	VARCHAR2(150)	
CUST_PHONE	VARCHAR2(20)	

Which SELECT statement accomplishes this task?

1. SELECT* FROM customers;
2. SELECT name, address FROM customers;
3. SELECT id, name, address, phone FROM customers;
4. SELECT cust_name, cust_address FROM customers;
5. SELECT cust_id, cust_name, cust_address, cust_phone FROM customers;.

Question: 3

Evaluate this SQL statement:

SELECT e.EMPLOYEE_ID,e.LAST_NAME,e.DEPARTMENT_ID, d.DEPARTMENT_NAME
FROM EMP e, DEPARTMENT d WHERE e.DEPARTMENT_ID = d.DEPARTMENT_ID;

In the statement, which capabilities of a SELECT statement are performed?

1. Selection, projection, join
2. Difference, projection, join
3. Selection, intersection, join
4. Intersection, projection, join
5. Difference, projection, product

Question: 4

Which two statements are true regarding the ORDER BY clause?

1. The sort is in ascending by order by default.
2. The sort is in descending order by default.
3. The ORDER BY clause must precede the WHERE clause.
4. The ORDER BY clause is executed on the client side.
5. The ORDER BY clause comes last in the SELECT statement.
6. The ORDER BY clause is executed first in the query execution.

Question: 5

From SQL*Plus, you issue this SELECT statement:

    SELECT * From orders;

You use this statement to retrieve data from a data table for _____.

1. Updating
2. Viewing
3. Deleting
4. Inserting
5. Truncating

Question: 6

Which SQL SELECT statement performs a projection, a selection, and join when executed?

1. SELECT p.id_number, m.manufacturer_id, m.city
   FROM product p, manufacturer m
   WHERE p.manufacturer_id = m.manufacturer_id AND m.manufacturer_id = 'NF10032';

2. SELECT id_number, manufacturer_id
   FROM product
   ORDER BY manufacturer_id, id_number;

3. SELECT id_number, manufacturer_id
   FROM product
   WHERE manufacturer_id = 'NF10032';

4. SELECT manufacturer_id, city
   FROM manufacturer
   WHERE manufacturer_id = 'NF10032'
   ORDER BY city;

Question: 7

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)	

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

1. SELECT customer_id, customer_name
   FROM customers
   WHERE postal_code CONTAINS NULL;

2. SELECT customer_id, customer_name
   FROM customers
   WHERE postal_code = '_____';

3. SELECT customer_id, customer_name
   FROM customers
   WHERE postal_code IS NULL;

4. SELECT customer_id, customer_name
   FROM customers
   WHERE postal code IS NVL;

5. SELECT customer_id, customer_name
   FROM customers
   WHERE postal_code = NULL;

Question: 8

Evaluate these two SQL statements:

1. SELECT last_name, salary , hire_date
    FROM employees
    ORDER BY salary DESC;

2. SELECT last_name, salary, hire_date
    FROM employees
    ORDER BY 2 DESC;

What is true about them?

1. The two statements produce identical results.
2. The second statement returns a syntax error.
3. There is no need to specify DESC because the results are sorted in descending order by default.
4. 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: 9

Evaluate the set of SQL statements:

CREATE TABLE dept(deptno NUMBER(2), dname VARCNAR2(14), loc VARCNAR2(13));
ROLLBACK;
DESCRIBE DEPT

What is true about the set?

1. The DESCRIBE DEPT statement displays the structure of the DEPT table.
2. The ROLLBACK statement frees the storage space occupies by the DEPT table.
3. The DESCRIBE DEPT statement returns an error ORA-04043: object DEPT does not exist.
4. The DESCRIBE DEPT statement displays the structure of the DEPT table only if the COMMIT statement introduced before the ROLLBACK statement..

Question: 10

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

Evaluate this SQL statement:

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;

What is its output?

1.

EMP_id	EMPLOYEE	SALARY	Mgr_id	Manager
110	Bob	8000		Bob
120	Ravi	6500	110	Ravi
108	Jennifer	6500	110	Jennifer
103	Chris	4200	120	Chris
105	Diana	5000	108	Diana

2.

EMP_id	EMPLOYEE	SALARY	Mgr_id	Manager
120	Ravi	6500	110	Bob
108	Jennifer	6500	110	Bob
103	Chris	4200	120	Ravi
105	Diana	500	108	Jennifer

3.

EMP_id	EMPLOYEE	SALARY	Mgr_id	Manager
110	Bob	800		
120	Ravi	6500	110	Bob
108	Jennifer	6500	110	Bob
103	Chris	4200	120	Ravi
105	Diana	5000	108	Jennifer

4.

EMP_id	EMPLOYEE	SALARY	Mgr_id	Manager
110	Bob	8000	110	Bob
120	Ravi	6500	120	Ravi
108	Jennifer	6500	108	Jennifer
103	Chris	4200	103	Chris
105	Diana	5000	105	Dina

5. The SQL statement produces an error.

Question: 11

Which /SQL*Plus feature can be used to replace values in the WHERE clause?

1. Substitution variables
2. Replacement variables
3. Prompt variables
4. Instead-of variables
5. This feature cannot be implemented through /SQL*Plus.

Question: 12

You are formulating queries in a SQL*Plus. Which of the following statement correctly describes how to specify a column alias?

1. Place the alias at the beginning of the statement to describe the table.
2. Place the alias after each column separated by a space to describe the column.
3. Place the alias after each column separated by a comma to describe the column.
4. Place the alias at the end of the statement to describe the table.

Question: 13

You want to use a function in you column clause of a SQL statement. The NVL function accomplishes which of the following tasks?

1. Assists in the distribution of output across multiple columns.
2. Enables you to specify alternate output for non-NULL column values.
3. Enables you to specify alternated out for NULL column values.
4. Nullifies the value of the column out put.

Question: 14

You want to use SQL*Plus to connect to the oracle database. Which of the following choices does not indicate a component you must specify when logging into the oracle?

1. The SQL*Plus Keyword.
2. The username
3. The password.
4. The database name.

The EMPLOYEE_HISTORY table contains these columns:

```
EMPLOYEE_ID      NUMBER
LAST_NAME        VARCHAR2(25)
FIRST_NAME       VARCHAR2(25)
DEPARTMENT_ID    NUMBER
POSITION         VARCHAR2(30)
SALARY           NUMBER(6,2)
HIRE_DATE        DATE
DEPART_DATE      DATE
```

The EMPLOYEE_HISTORY table contains only former employees.

You need to create a report to display all former employees that were hired on or after January 1, 1996. The data should display in this format:

```
Former Employee  Term of Employment
---------------  ----------------------
14837 - SMITH    10-MAY-92 / 01-JUN-01
```

Which SELECT statement could you use?

1. SELECT employee_id||' - '||last_name AS Former Employee,
    hire_date||' / '||depart_date AS Term of Employment
    FROM employee_history
    WHERE hire_date > '31-DEC-95';

2. SELECT employee_id||' - '||last_name "AS Former Employee",
    hire_date||' / '||depart_date "AS Term of Employment"
    FROM employee_history
    WHERE hire_date > '31-DEC-95';

3. SELECT employee_id||' - '||last_name 'Former Employee',
    hire_date||' / '||depart_date 'Term of Employment'
    FROM employee_history
    WHERE hire_date > '31-DEC-95' AND depart_date > NULL;

4. SELECT employee_id||' - '||last_name "Former Employee",
    hire_date||' / '||depart_date "Term of Employment"
    FROM employee_history WHERE hire_date > '31-DEC-95' AND depart_date <> NULL;

5. SELECT employee_id||' - '||last_name "Former Employee",
    hire_date||' / '||depart_date "Term of Employment"
    FROM employee_history
    WHERE hire_date > '31-DEC-95' AND depart_date IS NOT NULL;

The EMPloyee table contains these columns:

Empno	Number(4)
Ename	Varchar2(10)
job	Varchar2(10)
sal	Varchar2(10)

You need to display the employees information by using this query.

How many columns are presented after executing this query:

SELECT Empno||','||Ename||','||Job "Employee Information" FROM employee;

a. 1
b. 2
c. 3
d. 0
e. 4

Question: 17

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?

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

2. 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;

3. 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;

4. 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;

5. 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: 18

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?

1. SELECT last_name FROM EMP WHERE last_name LIKE '_A%';
2. SELECT last_name FROM EMP WHERE last name ='*A%'
3. SELECT last_name FROM EMP WHERE last name ='_A%';
4. SELECT last_name FROM EMP WHERE last name LIKE '*A%'

Question: 19

In which scenario would TOP N analysis be the best solution?

1. You want to identify the most senior employee in the company.
2. You want to find the manager supervising the largest number of employees.
3. You want to identify the person who makes the highest salary for all employees.
4. You want to rank the top three sales representatives who have sold the maximum number of products.

Question: 20

Evaluate this SQL statement:

    SELECT c.customer_id, o.order_id, o.order_date, p.product_name
    FROM customer c, curr_order o, product p
    WHERE customer.customer_id = curr_order.customer_id AND o.product_id = p.product_id
     ORDER BY o.order_amount;

This statement fails when executed. Which change will correct the problem?

1. Include the ORDER_AMOUNT column in the SELECT list.
2. Use the table name in the ORDER BY clause.
3. Remove the table aliases from the WHERE clause.
4. Use the table aliases instead of the table names in the WHERE clause.
5. Remove the table alias from the ORDER BY clause and use only the column name.

Question: 21

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?

1. SELECT book_title
   FROM books
   WHERE price between 500 and 900 AND purchase_date < '21-JAN-2001'
   ORDER BY purchase_date;
2. SELECT book_title
   FROM books WHERE price IN (500,900) AND purchase_date < '21-JAN-2001'
   ORDER BY purchase date ASC;
3. SELECT book_title
   FROM books WHERE price < 500 or > 900 AND purchase_date < '21-JAN-2001'
   ORDER BY purchase date DESC;
4. SELECT book_title
   FROM books WHERE (price < 500 OR price > 900) AND purchase_date < '21-JAN-2001'
   ORDER BY purchase date DESC;

Question: 22

For which task would you use the WHERE clause in a SELECT statement?

1. to designate the ORDER table location
2. to compare PRODUCT_ID values to 7382
3. to display only unique PRODUCT_ID values
4. to restrict the rows returned by a GROUP BY clause

The STUDENT_GRADES table has these columns:

STUDENT_ID	NUMBER(12)
SEMESTER_END	DATE
GPA	NUMBER(4,3)

The registrar has requested a report listing the students' grade point averages (GPA), sorted from highest grade point average to lowest within each semester, starting from the earliest date. Which statement accomplishes this?

1. SELECT student_id, semester_end, gpa
   FROM student_grades
   ORDER BY semester_end DESC, gpa DESC;

2. SELECT student_id, semester_end, gpa
   FROM student_grades
   ORDER BY semester_end ASC, gpa ASC;

3. SELECT student_id, semester_end, gpa
   FROM student_grades
   ORDER BY semester_end, gpa DESC;

4. SELECT student_id, semester_end, gpa
   FROM student_grades
   ORDER BY gpa DESC, semester_end DESC;

5. SELECT student_id, semester_end, gpa
   FROM student_grades
   ORDER BY gpa DESC, semester_end ASC;.

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 nnmher, 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?

1. SELECT customer_id, order_id, order_total
   FROM orders
   RANGE ON order_total (100 AND 2000) INCLUSIVE;

2. SELECT customer_id, order_id, order_total
   FROM orders HAVING order_total BETWEEN 100 and 2000;

3. SELECT customer_id, order_id, order_total
   FROM orders WHERE order_total BETWEEN 100 and 2000;

4. SELECT customer_id, order_id, order_total
   FROM orders WHERE order_total >= 100 and <= 2000;

5. SELECT customer_id, order_id, order_total
   FROM orders WHERE order_total >= 100 and order_total <= 2000;

Examine the structure of the PRODUCT table.

PRODUCT Table

PRODUCT _ID	NUMBER	Primary Key
PRODUCT_NAME	VARCHAR2(25)	
SUPPLIER_ID	NUMBER	references SUPPLIER(SUPPLIER_ID)
CATERORY_ID	NUMBER	
QTY_PER_UNIT	NUMBER	
LIST_RRICE	NUMBER (5,2)	
COST	NUMBER (5,2)	

You want to display all product identification numbers of products for which there are 500 or more available for immediate sale. You want the product numbers displayed alphabetically by supplier, then by product number from lowest to highest. Which statement should you use to achieve the required results?

1. SELECT product_id FROM product
   WHERE qty_per_unit >= 500 ORDER BY supplier_id, product_id;

2. SELECT product_id FROM product
   WHERE qty_per_unit >= 500 SORT BY supplier_id, product_id;

3. SELECT product_id FROM product
   WHERE qty_per_unit >= 500 ORDER BY supplier_id, product_id DESC;

4. SELECT product_id FROM product
   WHERE qty_per_unit > 500 SORT BY supplier_id, product_id;

Examine the data in TEACHER table.

ID	LAST_NAME	FIRST_NAME	SUBJECT_ID
88	Tsu	Ming	HST_AMER
70	Smith	Ellen	HST_INDIA
56	Jones	Karen	HST_REVOL
58	Hann	Jeff	HST_CURR
63	Hopewell	Mary Elizabetn	HST_RELIG

Which query should you use to return the following values from the TEACHER table?

```
Name                         Subject
--------------------------   -------------------
Jones, Karen                 HST_REVOL
Hopewell, Mary Elizabeth     HST_RELIG
```

1. SELECT last_name||', '||first_name "Name", subject_id "Subject"
   FROM teacher
   WHERE subject_id LIKE 'HST_%' ESCAPE '\';

2. SELECT last_name||', '||first_name "Name", subject_id "Subject"
   FROM teacher
   WHERE subject_id = 'HST_R%';

3. SELECT last_name||', '||first_name "Name", subject_id "Subject"
   FROM teacher
   WHERE subject_id LIKE '%HST_R%' ESC '\ ';

4. SELECT last_name||', '||first_name "Name", subject_id "Subject"
   FROM teacher
   WHERE subject_id LIKE 'HST_%';

You query the database with this SQL statement:

SELECT bonus FROM salary WHERE bonus BETWEEN 1 AND 250 OR (bonus IN(190, 500, 600) AND bonus BETWEEN 250 AND 500);

Which value could the statement return?

1. 100
2. 260
3. 400
4. 600

Examine the structure of the STUDENTS table:

STUDENT_ID	NUMBER	Primary Key
STUDENT_NAME	VARCHAR2(30)	
COURSE_ID	VARCHAR2(10)	NOT NULL
MARKS	NUMBER	
START_DATE	DATE	
FINISH_DATE	DATE	

You need to create a report of the 10 students who achieved the highest ranking in the course INT_SQL and who completed the course in the year 1999.

Which SQL statement accomplishes this task?

1. SELECT student_ id, marks, ROWNUM "Rank"
    FROM students
    WHERE ROWNUM <= 10 AND finish_date BETWEEN '01-JAN-99'
    AND '31-DEC-99' AND course_id = 'INT_SQL'
    ORDER BY marks DESC;

2. SELECT student_id, marks, ROWID "Rank"
    FROM students WHERE ROWID <= 10 AND finish_date BETWEEN '01-JAN-99'
    AND '31-DEC-99' AND course_id = 'INT_SQL' ORDER BY marks;

3. SELECT student_id, marks, ROWNUM "Rank"
    FROM (SELECT student_id, marks FROM students WHERE ROWNUM <= 10 AND
    finish_date BETWEEN '01-JAN-99' AND '31-DEC-99' AND course_id = 'INT_SQL'
    ORDER BY marks DESC);

4. SELECT student_id, marks, ROWNUM "Rank"
    FROM (SELECT student_id, marks FROM students ORDER BY marks DESC) WHERE
    ROWNUM <= 10 AND finish_date BETWEEN '01-JAN-99' AND '31-DEC-99'
    AND course_id = 'INT_SQL';

Examine the structure of the LINE_ITEM table.

```
LINE_ITEM_ID        NUMBER(9)
ORDER_ID            NUMBER(9)                NOT NULL
PRODUCT_ID          NUMBER(9)                NOT_NULL
QUANTITY            NUMBER(9)
Constraint primary key (LINE_ITEM_ID, ORDER_ID)
Constraint foreign key ORDER_ID REFERENCES CURR_ORDER(ORDER_ID)
Constraint foreign key PRODUCT_ID REFERENCES PRODUCT(PRODUCT_ID)
```

You must display the order number, line item number, product identification number, and quantity of each item where the quantity ranges from 10 through 100. The order numbers must be in the range of 1500 through 1575. The results must be sorted by order number from lowest to highest and then further sorted by quantity from highest to lowest.

Which statement should you use to display the desired result?

1. SELECT order_id, line_item_id, product_id, quantity
    FROM line_item WHERE quantity BETWEEN 9 AND 101 AND
    order_id BETWEEN 1500 AND 1575
    ORDER BY order_id DESC, quantity DESC;

2. SELECT order_id, line_item_id, product_id, quantity
    FROM line_item
    WHERE (quantity > 10 AND quantity < 100) AND
    order_id BETWEEN 1500 AND 1575
    ORDER BY order_id ASC, quantity;

3. SELECT order_id, line_item_id, product_id, quantity
    FROM line_item WHERE (quantity > 9 OR quantity < 101) AND
    order_id BETWEEN 1500 AND 1575
    ORDER BY order_id, quantity;

4. SELECT order_id, line_item_id, product_id, quantity
    FROM line_item WHERE quantity BETWEEN 10 AND 100 AND
    order_id BETWEEN 1500 AND 1575
    ORDER BY order_id, quantity DESC;

The ITEM table contains these columns:

```
ITEM_ID            NUMBER(9)
COST               NUMBER(7,2)
RETAIL             NUMBER(7,2)
```

You need to create a report that displays the cost, the retail price, and the profit for item number 783920. To calculate the profit, subtract the cost of the item from its retail price, and then deduct an administrative fee of 25 percent of this derived value.

Which SELECT statement produces the desired results?

1. SELECT cost, retail, (retail - cost) - ((retail - cost) * .25) "Profit" FROM item WHERE item_id = 783920;
2. SELECT cost, retail, (retail - cost) - retail - (cost * .25) "Profit" FROM item WHERE item_id = 783920;
3. SELECT cost, retail, (retail - cost - retail - cost) * .25 "Profit" FROM item WHERE item_id = 783920;
4. SELECT cost, retail, retail - cost - retail - cost * .25 "Profit" FROM item WHERE item_id = 783920;

Question: 31

The ITEM table contains these columns:

```
ITEM_ID            NUMBER(9)
COST               NUMBER(7,2)
RETAIL             NUMBER(7,2)
```

The RETAIL and COST columns contain values greater than zero.

Evaluate these two SQL statements:

1. SELECT item_id, (retail * 1.25) + 5.00 - (cost * 1.10) - (cost * .10) AS Calculated Profit FROM item;
2. SELECT item_id, retail * 1.25 + 5.00 - cost * 1.10 - cost * .10 "Calculated Profit" FROM item;

What will be the result?
1. Statement 1 will display the 'Calculated Profit' column heading.
2. Statement 1 and statement 2 will return the same value.
3. Statement 1 will return a higher value than statement 2.
4. One of the statements will NOT execute.

Question: 32

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?

1. The SQL statement displays the desired results.
2. The column in the WHERE clause should be changed to display the desired results.
3. The operator in the WHERE clause should be changed to display the desired results.
4. The WHERE clause should be changed to use an outer join to display the desired results.

Question: 33

Which two statements are true about WHERE and HAVING clauses?

1. A WHERE clause can be used to restrict both rows and groups.
2. A WHERE clause can be used to restrict rows only.
3. A HAVING clause can be used to restrict both rows and groups.
4. A HAVING clause can be used to restrict groups only.
5. A WHERE clause CANNOT be used in a query of the query uses a HAVING clause.
6. A HAVING clause CANNOT be used in subqueries.

Question: 34

You are sorting data in a table in you SELECT statement in descending order. The column you are sorting on contains NULL records, where will the NULL record appears?

1. At the beginning of the list.
2. At the end of the list.
3. In the middle of the list.
4. At the same location they are listed in the unordered table.

Question: 35

The ACCOUNT table contains these columns:

        ACCOUNT_ID   NUMBER(12)
        PREVIOUS_BALANCE   NUMBER(7,2)
        PAYMENTS   NUMBER(7,2)
        NEW_PURCHASES   NUMBER(7,2)
        CREDIT_LIMIT   NUMBER(7)

You need to display the account number, finance charge, and current balance for accounts 1500 through 2000 with a current balance greater than the account's credit limit.

The finance charge is .9 percent (.009) of the previous balance. Adding the previous balance value, new purchases value, and finance charge value, and then subtracting the payments value yields the current balance value.

Evaluate this statement:

SELECT account_id, NVL(previous_balance, 0) * .009 finance_charge,
NVL(new_purchases, 0) + (NVL(previous_balance, 0) * 1.009)
- NVL(payments, 0) current_balance
FROM account
WHERE (new_purchases + (previous_balance * 1.009)) - payments > credit_limit
AND account_id BETWEEN 1500 AND 2000;

Which statement about this SELECT statement is true?

1. The statement calculates the finance charge incorrectly.
2. The statement calculates the current balance incorrectly.
3. The statement returns only accounts that have NO previous balance.
4. The statement returns only accounts that have new purchases, previous balance, and payments values.

Question: 36

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?

1. SELECT dept_id, job_cat, MAX(salary) FROM employees WHERE salary > MAX(salary);

2. SELECT dept_id, job_cat, MAX(salary) FROM employees GROUP BY dept_id, job_cat;

3. SELECT dept_id, job_cat, MAX(salary) FROM employees;

4. SELECT dept_id, job_cat, MAX(salary) FROM employees GROUP BY dept_id;

5. SELECT dept_id, job_cat, MAX(salary)
   FROM employees GROUP BY dept_id, job_cat, salary;

Question: 37

Management has asked you to calculate the value 12*salary* comossion_pct for all the employees in the EMP table. The EMP table contains these columns:

```
LAST NAME        VARCNAR2(35)       NOT NULL
SALARY           NUMBER(9,2)        NOT NULL
COMMISION_PCT    NUMBER(4,2)
```

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

1. SELECT last_name, 12*salary*commison_pct FROM emp;
2. SELECT last_name, 12*salary* (commission_pct,0) FROM emp;
3. SELECT last_name, 12*salary*(nvl(commission_pct,0)) FROM emp;
4. SELECT last_name, 12*salary*(decode(commission_pct,0)) FROM emp;

Question: 38

Examine the description of the STUDENTS table:

```
STD_ID            NUMBER(4)
COURSE_ID         VARCHARD2(10)
START_DATE        DATE
END_DATE          DATE.
```

Which two aggregate functions are valid on the START_DATE column?

1. SUM(start_date)
2. AVG(start_date)
3. COUNT(start_date)
4. AVG(start_date, end_date)
5. MIN(start_date)
6. MAXIMUM(start_date)

Question: 39

The EMPLOYEE tables has these columns:

```
LAST_NAME         VARCNAR2(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?

1. SELECT last_name, (salary * 12) * commission_pct FROM EMPLOYEES;
2. SELECT last_name, (salary * 12) * IFNULL(commission_pct,0) FROM EMPLOYEES;
3. SELECT last_name, (salary * 12) * NVL2(commission_pct, 0) FROM EMPLOYEES;
4. SELECT last_name, (salary * 12) * NVL(commission_pct, 0) FROM EMPLOYEES;

Question: 40

You would like to display the system date in the format "Monday, 01 June, 2001".

Which SELECT statement should you use?

1. SELECT TO_DATE(SYSDATE, 'FMDAY, DD Month, YYYY') FROM dual;
2. SELECT TO_CHAR(SYSDATE, 'FMDD, DY Month, 'YYY') FROM dual;
3. SELECT TO_CHAR(SYSDATE, 'FMDay, DD Month, YYYY') FROM dual;
4. SELECT TO_CHAR(SYSDATE, 'FMDY, DDD Month, YYYY')
5. SELECT TO_DATE(SYSDATE, 'FMDY, DDD Month, YYYY') FROM dual;

Question: 41

Evaluate the SQL statement:

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

What will be displayed?

1. 0
2. 1
3. 0.00
4. An error statement

Question: 42

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?

1. The statement executes successfully and returns the student ID and sum of all marks for
1. each student who obtained more than the average mark in each subject.
2. The statement returns an error at the SELECT clause.
3. The statement returns an error at the WHERE clause.
4. The statement returns an error at the ORDER BY clause.

Question: 43

Which three SELECT statements displays 2000 in the format "$2,000.00"?

1. SELECT TO_CHAR (2000, '$#,###.##') FROM dual;
2. SELECT TO_CHAR (2000, '$0,000.00') FROM dual;
3. SELECT TO_CHAR (2000, '$9,999.00') FROM dual;
4. SELECT TO_CHAR (2000, '$9,999.99') FROM dual;
5. SELECT TO_CHAR (2000, '$2,000.00') FROM dual;
6. SELECT TO_CHAR (2000, '$N,NNN.NN ') FROM dual;

Question: 44

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?

1. SELECT dept_id, MIN(salary(, MAX(salary)
    FROM employees
    WHERE MIN(salary) < 5000 AND MAX(salary) > 15000;

2. SELECT dept_id, MIN(salary), MAX(salary)
    FROM employees
    WHERE MIN(salary) < 5000 AND MAX(salary) > 15000
    GROUP BY dept_id;

3. SELECT dept_id, MIN(salary), MAX(salary)
    FROM employees HAVING MIN(salary) < 5000 AND MAX(salary) > 15000;

4. SELECT dept_id, MIN(salary), MAX(salary)
    FROM employees
    GROUP BY dept_id HAVING MIN(salary) < 5000 AND MAX(salary) > 15000;

5. SELECT dept_id, MIN(salary), MAX(salary)
    FROM employees
    GROUP BY dept_id, salary HAVING MIN(salary) < 5000 AND MAX(salary) > 15000;

Question: 45

Which two are true about aggregate functions?

1. You can use aggregate functions in any clause of a SELECT statement.
2. You can use aggregate functions only in the column list of the SELECT clause and in the WHERE clause of a SELECT statement.
3. You can mix single row columns with aggregate functions in the column list of a SELECT statement by grouping on the single row columns.
4. You can pass column names, expressions, constants, or functions as parameters to an aggregate function.
5. You can use aggregate functions on a table, only by grouping the whole table as one single group.
6. You cannot group the rows of a table by more than one column while using aggregate functions.

Question: 46

Which four statements correctly describe functions that are available in SQL?

1. INSTR returns the numeric position of a named character.
2. NVL2 returns the first non-null expression in the expression list.
3. TRUNCATE rounds the column, expression, or value to n decimal places.
4. DECODE translates an expression after comparing it to each search value.
5. TRIM trims the heading of trailing characters (or both) from a character string.
6. NVL compares two expressions and returns null if they are equal, or the first expression of they are not equal.
7. NULLIF compares two expressions and returns null if they are equal, or the first expression if they are not equal.

Question: 47

Examine the structures of the PATIENT, PHYSICIAN, and ADMISSION tables.

PATIENT Table

PATIENT_ID	NUMBER	Primary Key
LAST_NAME	VARCHAR2 (30)	
FIRST_NAME	VARCHAR2 (25)	
DOB	DATE	
INS_CODE	NUMBER	

PHYSICIAN Table

PHYSICIAN _ID	NUMBER	Primary Key
LAST_NAME	VARCHAR2 (30)	NOT NULL
FIRST_NAME	VARCHAR2 (25)	NOT NULL
LICENSE_NO	NUMBER (7)	NOT NULL
HIRE_DTAE	DATE	

ADMISSION Table

PATIENT_ID	NUMBER	Ref. PATIENT.ATIENT_ID
PHYSICIAN_ID	NUMBER	Ref. PHYSICIAN.PHYSICIAN_ID
ADMIT_DATE	DATE	
DISCHG_DATE	DATE	
ROOM_ID	NUMBER	Ref. ROOM.ROOM_ID
Primary Key(PATIENT_ID,PHYSICIAN_ID)		

Which SQL statement will produce a list of all patients who have more than one physician?

1. SELECT p.patient_id FROM patient p
    WHERE p.patient_id IN (SELECT patient_id FROM admission GROUP BY patient_id
    HAVING COUNT(*) > 1);

2. SELECT DISTINCT a.patient_id
    FROM admission a, admission a2
    WHERE a.patient_id = a2.patient_id AND a.physician_id <> a2.physician_id;

3. SELECT patient_id FROM admission
    WHERE COUNT(physician_id) > 1;

4. SELECT patient_id
    FROM patient FULL OUTER JOIN physician;

Question: 48

Which clause should you use to exclude group results?

1. WHERE
2. HAVING
3. RESTRICT
4. GROUP BY
5. ORDER BY

Question: 49

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

1. Immediately after the SELECT clause
2. Before the WHERE clause
3. Before the FROM clause
4. After the ORDER BY clause
5. After the WHERE clause

Question: 50

Which two are character manipulation functions?

1. TRIM
2. REPLACE
3. TRUNC
4. TO_DATE
5. MOD
6. CASE