**SQL Final Test: 50 Marks**

Name : Sarvesh sanjay salunke

Batch No : Python full stack (BatchNo.1211)

**Part 1: Multiple-Choice Questions (MCQs)**

1. **b) Aggregates data into groups based on one or more columns.**
2. **a) MAX()**
3. **a) Filters rows after grouping.**
4. **b) IS NULL**
5. **b) Finds names containing the letter 'a'.**
6. **d) FULL OUTER JOIN**
7. **b) FROM → WHERE → GROUP BY → HAVING → SELECT → ORDER BY**
8. **d) 12 rows**
9. **b) COUNT(DISTINCT column)**
10. **a) Finds departments with more than 5 employees.**

**Part 2: Practical Questions**

1. **SELECT \* FROM capgemini.` employees` WHERE JoinDate > '2020-01-01';**
2. **SELECT name, salary FROM batch1211db.employees WHERE salary > 60000 ORDER BY salary DESC;**
3. **SELECT name from batch1211db.employees WHERE name LIKE '%e';**
4. **SELECT SUM(Salary) AS total\_salary FROM employees WHERE DepartmentID = 3;**
5. **SELECT \* FROM employees WHERE DepartmentID IS NULL;**
6. **SELECT DepartmentID, AVG(salary) AS average\_salary FROM employees GROUP BY DepartmentID;**
7. **SELECT DepartmentID FROM employees GROUP BY DepartmentID HAVING COUNT(ID) > 1;**
8. **SELECT name, Salary FROM employees WHERE Salary = (SELECT MAX(Salary) FROM employees);**
9. **SELECT employees.name AS employee\_name, departments.DepartmentName FROM employees JOIN departments ON employees.ID = departments.DepartmentID;**
10. **SELECT COUNT(\*) AS total\_employees FROM employees;**
11. **SELECT name FROM employees WHERE YEAR(JoinDate) = 2022;**
12. **SELECT DepartmentID, MIN(salary) AS min\_salary FROM employees GROUP BY DepartmentID;**
13. **SELECT ID,Name, departments.DepartmentName FROM employees LEFT JOIN departments ON employees.ID = departments.DepartmentID;**
14. **SELECT DepartmentID, COUNT(\*) AS employee\_count FROM employees GROUP BY DepartmentID;**
15. **SELECT departments.departmentID, departments.departmentName FROM departments LEFT JOIN employees ON employees.ID = departments.DepartmentID WHERE employees.ID IS NULL;**
16. **SELECT MAX(salary) AS second\_highest\_salary FROM employees WHERE salary < (SELECT MAX(salary) FROM employees);**
17. **SELECT ID, Name, Salary FROM employees WHERE salary BETWEEN 50000 AND 80000;**
18. **SELECT Name, Salary FROM employees ORDER BY Salary ASC;**
19. **SELECT Name, Salary FROM employees WHERE Name LIKE '%an%';**
20. **SELECT employees.ID, employees.Name, employees.Salary, departments.DepartmentName FROM employees JOIN departments ON employees.ID = departments.DepartmentID WHERE departments.DepartmentName = 'HR' AND employees.Salary > 60000;**