MULTIPLE CHOICE

1. B
2. C
3. C
4. B
5. A
6. C
7. C
8. B
9. B
10. B
11. A
12. B
13. C
14. B
15. B

FILL THE BLACK

16. CREATE DATABASE zoo;
17. ALTER TABLE animal
    ADD COLMN weight NUMERIC;
18. SELECT LENGHT(‘character’);
19. SELECT COUNT (DISTINCT species) FROM animals;
20. SELECT CURRENT_DATE;
21. DELETE FROM table_name;
22. ALTER TABLE animal RENAME TO pet;
23. ALTER TABLE animal RENAME COLUMN id TO identifier;
24. \d table_name;
25. \q
26. SELECT * FROM animal WHERE species LIKE ‘C%’;
27. SELECT UPPER(‘upper’);
28. SELECT ROUND (123.456, 2);
29. SELECT EXTRACT(DOW FROM ‘2025-5-13’::DATE);
30. pg_dump -U username -F c -b -v -f /path/to/output_file.dump database_name

TRUE OR FALSE

31. TRUE
32. FALSE
33. TRUE
34. FALSE
35. FALSE
36. TRUE
37. FALSE
38. TRUE
39. TRUE
40. TRUE

EXPLANATORY QUESTIONS

41. Inner join return only the rows where there is a match in both table

    WHILE

    Left join return all rows from the left table and matching rows from the right table.

    Example.

    Inner join

    SELECT employees.name, departments.department_name

    FROM employees

    INNER JOIN departments

    ON employees.department_id = departments.department_id;

    Left Join

    SELECT e.name, d.department_name

    FROM employees e

    LEFT JOIN departments d

    ON e.department_id = d.department_id;

42. I can hanlde division by zero using NULLIF function.

    example.

    SELECT 10 / NULLIF (2,0);

43. The purpose of GROUP BY is to group rows that have the same value.

    Example.

    SELECT product, SUM (quality) AS total_sold

    FROM sales

    GROUP BY product;

44. Data arthimetic in PostgreSQL allows to add or substract time interval like days.

    Example:

    SELECT CURRENT_DATE + INTERVAL '7 days' AS new_date;

45. Like operator used to match pattern that are case sensitive

    WHILE

    I like used to match patterns regardless of whether the characters are uppercase or lowercase.

46. To define the colums as SERIAL.

    Set the primary key: Mark the SERIAL column as the primary key to ensure it has a unique constraint and index.

47. Foreign key is used to enforce relationship between two tables ensuring the that a column of one table refer to the primary key of another table.

    Example:

```
CREATE TABLE departments (
    department_id SERIAL PRIMARY KEY,
    department_name VARCHAR(100)
);
CREATE TABLE employees (
    employee_id SERIAL PRIMARY KEY,
    name VARCHAR(100),
    department_id INT,
    FOREIGN KEY (department_id) REFERENCES departments (department_id)
);
```

48. Both WHERE and HAVING are used to filter data in SQL queries, but they are used in different contexts and serve different purposes

Examle.

```
SELECT product_id, quantity, price
FROM sales
WHERE quantity > 5;


SELECT product_id, SUM(quantity) AS total_quantity
FROM sales
GROUP BY product_id
HAVING SUM(quantity) > 10;
```

49. The COALESCE() function returns the first non-NULL value in the list of arguments prvided.

We use COALESCE()

- To provide default value
- To avaoid displaying NULL value

Example:

```
SELECT id, COALESCE(nickname, first_name) AS display_name
FROM users;
```

50. To search Case sensitive in atext can be performed using I LIKE, LOWER() or UPPER() functions, CITEXT.

Examples:

I LIKE

```
SELECT * FROM users
WHERE name ILIKE 'john%';
```

LOWER() or UPPER()

```
SELECT * FROM users
WHERE LOWER(name) = LOWER('John');
```

CITEXT

```
CREATE EXTENSION IF NOT EXISTS citext;
```