**1. Code Structure (3 Qs)**

1. Write a program that prints your name, age, and city in a structured format (each on a new line).
2. Write a program that prints the first 10 natural numbers in one line, separated by commas.
3. Write a program that prints the sum of two numbers, but the numbers should be **declared on different lines** and added on the last line.

**2. Variables (5 Qs)**

1. Declare variables for a student’s name, roll number, and marks, then display them in one sentence.
2. Create a constant PI and use it to calculate the area of a circle with radius 7.
3. Swap the values of two variables and print them before and after swapping.
4. Declare three variables a, b, c. Assign them numbers and print their average.
5. Use let and var inside a block and demonstrate the scope difference.

**3. Data Types (5 Qs)**

1. Declare variables of all primitive data types (string, number, boolean, null, undefined, bigint, symbol) and print their types.
2. Create an object representing a book (title, author, price) and print its properties.
3. Create an array of 5 fruits and print the first and last fruit.
4. Write a program to check whether a given variable is of type object or array.
5. Convert a number into a string and check its type.

**4. Basic Operators & Maths (6 Qs)**

1. Write a program to calculate the perimeter of a rectangle given length and width.
2. Write a program to calculate simple interest.
3. Input two numbers and display the result of all arithmetic operators (+, -, \*, /, %, \*\*).
4. Write a program to find the square root of a number.
5. Write a program to convert temperature from Celsius to Fahrenheit.
6. Write a program to calculate the average of five subject marks.

**5. Comparisons (4 Qs)**

1. Compare a number and a string using == and ===. Show the difference.
2. Write a program that checks if a number is between 10 and 20.
3. Write a program that compares two numbers and prints the larger one.
4. Write a program to check if two given strings are equal (case-sensitive).

**6. Conditional Branching: if (5 Qs)**

1. Write a program that checks if a number is even or odd.
2. Write a program that finds the largest of three numbers.
3. Write a program that checks whether a character is a vowel or consonant.
4. Write a program that checks if a person is eligible for a driving license (age ≥ 18).
5. Write a program that classifies marks into grades (A, B, C, Fail).

**7. Conditional Branching: '?' Ternary (3 Qs)**

1. Use a ternary operator to check whether a number is positive or negative.
2. Use a ternary operator to assign “child”, “teen”, or “adult” based on age.
3. Use a ternary operator to print the smaller of two numbers.

**8. Logical Operators (4 Qs)**

1. Write a program to check if a number lies between 1 and 100.
2. Write a program to check if a given year is divisible by 4 and not by 100, or divisible by 400 (leap year check).
3. Write a program to check if a person is eligible to vote (age ≥ 18) **and** is a citizen.
4. Write a program to check if a number is divisible by 2 **or** 5.

**9. Nullish Coalescing (??) (3 Qs)**

1. Write a program to assign a default name “Guest” if no username is provided.
2. Write a program to assign default marks = 0 if marks are null or undefined.
3. Write a program to check if a discount value is given; if not, assign 5%.

**10. Loops: while (4 Qs)**

1. Print numbers from 1 to 20 using a while loop.
2. Write a program to calculate the factorial of a number using while loop.
3. Write a program to print the sum of the first 10 natural numbers.
4. Write a program to reverse a given number using while loop.

**11. Loops: for (4 Qs)**

1. Write a program to print the multiplication table of any number entered.
2. Write a program to find the sum of even numbers between 1 and 50.
3. Write a program to print the squares of numbers from 1 to 10.
4. Write a program to check if a number is prime using a for loop.

**12. Switch Statement (4 Qs)**

1. Write a program using switch to display the name of a weekday based on a number (1–7).
2. Write a program using switch to create a simple calculator (+, -, \*, /).
3. Write a program using switch to print the season based on month number.
4. Write a program using switch to print a grade (A, B, C, D, Fail) based on marks.