

## Function Problems with Test Cases (1–30)

### 1. Print “Hello World”

Test Case:

Input: —

Output: Hello World

### 2. Greeting message

Test Case:

Input: "Ayush"

Output: Hello Ayush

### 3. Add two numbers

Test Case:

Input: 10, 20

Output: 30

### 4. Square of a number

Test Case:

Input: 5

Output: 25

### 5. Even or odd check

Test Case:

Input: 8

Output: Even

### 6. Maximum of two numbers

Test Case:

Input: 15, 9

Output: 15

7. Print numbers from 1 to N

Test Case:

Input: 5

Output: 1 2 3 4 5

8. Sum of first N natural numbers

Test Case:

Input: 5

Output: 15

9. Multiplication table

Test Case:

Input: 3

Output: 3 6 9 12 15

10. Count characters in string

Test Case:

Input: "Python"

Output: 6

11. Reverse a string

Test Case:

Input: "abc"

Output: "cba"

12. Count vowels in string

Test Case:

Input: "hello"

Output: 2

13. Positive or negative check

Test Case:

Input: -4

Output: Negative

14. Factorial of a number

Test Case:

Input: 5

Output: 120

15. Length of a list

Test Case:

Input: [1,2,3,4]

Output: 4

16. Largest element in list

Test Case:

Input: [4, 9, 1, 7]

Output: 9

17. Smallest element in list

Test Case:

Input: [4, 9, 1, 7]

Output: 1

#### 18. Sum of list elements

Test Case:

Input: [1,2,3]

Output: 6

#### 19. Remove duplicates from list

Test Case:

Input: [1,2,2,3]

Output: [1,2,3]

#### 20. Palindrome string check

Test Case:

Input: "madam"

Output: Palindrome

#### 21. Count even & odd numbers

Test Case:

Input: [1,2,3,4]

Output: Even=2, Odd=2

#### 22. Prime number check

Test Case:

Input: 7

Output: Prime

#### 23. Prime numbers up to N

Test Case:

Input: 10

Output: 2 3 5 7

24. Average of list elements

Test Case:

Input: [10,20,30]

Output: 20

25. Merge two lists

Test Case:

Input: [1,2] , [3,4]

Output: [1,2,3,4]

26. Frequency of list elements

Test Case:

Input: [1,1,2]

Output: {1:2, 2:1}

27. Check all elements positive

Test Case:

Input: [1,2,3]

Output: True

28. Second largest number

Test Case:

Input: [10,20,30]

Output: 20

29. Celsius to Fahrenheit

Test Case:

Input: 0

Output: 32

30. Return square and cube

Test Case:

Input: 3

Output: (9, 27)