**Interview-Style Programming Questions: Loops, Strings, and Number Operations**

### 1. Print Numbers from 1 to n

**Question:** Write a program to print numbers from 1 to n. **Explanation:** Use a loop starting from 1 to n and print each number. - **Input:** n = 5 - **Output:** 1 2 3 4 5

### 2. Print Numbers from m to n

**Question:** Write a program to print numbers from m to n. **Explanation:** Loop from m to n and print values. - **Input:** m = 3, n = 7 - **Output:** 3 4 5 6 7

### 3. Print Numbers from n to 1 in Reverse

**Question:** Write a program to print numbers in reverse from n to 1. **Explanation:** Use a loop starting from n and decrement to 1. - **Input:** n = 5 - **Output:** 5 4 3 2 1

### 4. Print Numbers from n to m in Reverse

**Question:** Write a program to print numbers from n to m in reverse. **Explanation:** Start from n and go down to m. - **Input:** n = 10, m = 6 - **Output:** 10 9 8 7 6

### 5. Sum of n Natural Numbers

**Question:** Write a program to calculate the sum of first n natural numbers. **Explanation:** Use formula or loop to sum from 1 to n. - **Input:** n = 5 - **Output:** 15

### 6. Factorial of a Number

**Question:** Write a program to find the factorial of a number. **Explanation:** Multiply all numbers from 1 to n. - **Input:** n = 5 - **Output:** 120

### 7. Sum of m to n Numbers

**Question:** Write a program to find the sum of all numbers from m to n. **Explanation:** Loop from m to n and add values. - **Input:** m = 3, n = 6 - **Output:** 18

### 8. Product of m to n Numbers

**Question:** Write a program to find the product of numbers from m to n. **Explanation:** Loop from m to n and multiply values. - **Input:** m = 2, n = 4 - **Output:** 24

### 9. Print Factors of a Number

**Question:** Write a program to print all factors of a given number. **Explanation:** Check divisibility of number from 1 to n. - **Input:** n = 6 - **Output:** 1 2 3 6

### 10. Count of Factors

**Question:** Write a program to count how many factors a number has. **Explanation:** Increment count when divisible. - **Input:** n = 6 - **Output:** 4

### 11. Prime Number Check

**Question:** Check if a number is prime. **Explanation:** A number is prime if it has exactly 2 factors. - **Input:** n = 7 - **Output:** Prime

### 12. Even Numbers from m to n

**Question:** Print all even numbers between m and n. **Explanation:** Use loop and check if divisible by 2. - **Input:** m = 3, n = 10 - **Output:** 4 6 8 10

### 13. Odd Numbers from m to n

**Question:** Print all odd numbers between m and n. **Explanation:** Check if number % 2 != 0. - **Input:** m = 3, n = 10 - **Output:** 3 5 7 9

### 14. Count of Even and Odd Numbers

**Question:** Count how many even and odd numbers are in the range m to n. **Explanation:** Use counters for even and odd. - **Input:** m = 3, n = 7 - **Output:** Even = 2, Odd = 3

### 15. Reverse a String

**Question:** Reverse a given string. **Explanation:** Use slicing or loop. - **Input:** “hello” - **Output:** “olleh”

### 16. Check for Palindrome String

**Question:** Check if a string is a palindrome. **Explanation:** Compare string with its reverse. - **Input:** “madam” - **Output:** Palindrome

### 17. Sum of Digits

**Question:** Calculate the sum of digits of a number. **Explanation:** Use loop and % 10 to extract digits. - **Input:** 123 - **Output:** 6

### 18. Product of Digits

**Question:** Calculate the product of digits. **Explanation:** Multiply digits extracted from number. - **Input:** 123 - **Output:** 6

### 19. Armstrong Number Check

**Question:** Check if a number is an Armstrong number. **Explanation:** Sum of cube of digits equals the number. - **Input:** 153 - **Output:** Armstrong number

### 20. Reverse a Number

**Question:** Reverse the digits of a number. **Explanation:** Use loop with % and // to reverse. - **Input:** 123 - **Output:** 321

### 21. Palindrome Number Check

**Question:** Check if a number is a palindrome. **Explanation:** Compare number with its reverse. - **Input:** 121 - **Output:** Palindrome

### 22. Count Vowels in String

**Question:** Count number of vowels in a string. **Explanation:** Loop and check for a, e, i, o, u. - **Input:** “apple” - **Output:** 2

### 23. Count Consonants in String

**Question:** Count consonants in a string. **Explanation:** Check for alphabetic characters not vowels. - **Input:** “apple” - **Output:** 3

### 24. Count Vowels and Consonants

**Question:** Count vowels and consonants in input string. **Explanation:** Maintain two counters. - **Input:** “apple” - **Output:** Vowels = 2, Consonants = 3

### 25. Perfect Number Check

**Question:** Check if a number is perfect. **Explanation:** Sum of proper divisors equals the number. - **Input:** 28 - **Output:** Perfect number

### 26. Neon Number Check

**Question:** Check if a number is a neon number. **Explanation:** Square the number, sum digits, match original. - **Input:** 9 - **Output:** Neon number

### 27. Strong Number Check

**Question:** Check if a number is a strong number. **Explanation:** Sum of factorial of digits equals the number. - **Input:** 145 - **Output:** Strong number

### 28. Harshad Number Check

**Question:** Check if a number is divisible by the sum of its digits. **Explanation:** Calculate digit sum and check divisibility. - **Input:** 18 - **Output:** Harshad number

### 29. Fibonacci Series

**Question:** Print the Fibonacci series up to n terms. **Explanation:** Start with 0, 1 and continue with sum of last two. - **Input:** n = 5 - **Output:** 0 1 1 2 3

### 30. Check for Neon Number (Repeated)

**Question:** Again, check for a neon number (example). **Explanation:** Square number and sum digits. - **Input:** 9 - **Output:** Neon number