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Python Programming Assessment

Part A: Loop Statements (15 Questions)

1. Write a program to print the sum of all even numbers between 1 and 100.
2. Write a program to print all numbers divisible by 7 but not by 5 between 100 and 200.
3. Write a program to find the factorial of a given number using a for loop.
4. Write a program to display the Fibonacci sequence up to n terms using a for loop.
5. Write a program to count and display the number of digits in a number using a while loop.
6. Write a program to calculate the sum of digits of a number using a while loop.
7. Write a program to reverse a number using a while loop.
8. Write a program to find all prime numbers between 1 and 100.
9. Write a program to display the multiplication table of any number entered by the user.
10. Write a program to count vowels and consonants in a string using a loop.
11. Write a program to print all numbers from 1 to 100, skipping multiples of 3.
12. Write a program to display the cube of numbers from 1 to n using a for loop.
13. Write a program to find and print all Armstrong numbers between 100 and 1000.
14. Write a program to display right angle triangle of stars (5 rows)
15. Write a program to display the number pattern: 1, 1 2, 1 2 3 , 1 2 3 4 in a right angle triangle

Part B: Conditional Statements (15 Questions)

16. Write a program to check if a number is positive, negative, or zero.
17. Write a program to check whether a number is even or odd.
18. Write a program to check if a given year is a leap year or not.
19. Write a program to find the greatest among three numbers entered by the user.

20. Write a program to check whether a character is a vowel, consonant, digit, or special character.

21. Write a program to calculate the grade of a student based on marks using if-elif-else:

- 90–100 → A
- 80–89 → B
- 70–79 → C
- 60–69 → D
- Below 60 → F

22. Write a program to check if a number is divisible by both 3 and 5.

23. Write a program to determine whether a triangle is valid using its three sides.

24. Write a program to accept age and check if the person is eligible to vote.

25. Write a program to check whether a number is prime using conditional statements and loops.

26. Write a program to check whether a given string is a palindrome.

27. Write a program to calculate the electricity bill based on conditions:

- Up to 100 units → ₹1.5/unit
- 101–200 units → ₹2.5/unit
- Above 200 units → ₹4/unit

28. Write a program to accept a day number (1–7) and display its corresponding weekday.

29. Write a program to simulate a simple calculator performing +, –, ×, ÷ using if-elif-else.

30. Write a program to determine if a given character is uppercase, lowercase, or not an alphabet.