**Question 1**

|  |
| --- |
| **Source Code** |

|  |
| --- |
| # Write a program to demonstrate the use of different operators in python.  def operators\_demo(a, b):  print("Addition:", a + b)  print("Subtraction:", a - b)  print("Multiplication:", a \* b)  print("Division:", a / b if b != 0 else "Undefined")  print("Modulus:", a % b if b != 0 else "Undefined")  print("Floor Division:", a // b if b != 0 else "Undefined")  print("Exponentiation:", a \*\* b)  print("Equal:", a == b)  print("Not Equal:", a != b)  print("Greater:", a > b)  print("Smaller:", a < b)  print("Logical AND:", a > 0 and b > 0)  print("Logical OR:", a > 0 or b > 0)  print("Logical NOT:", not(a > 0))  a = int(input("Enter first number: ")) b = int(input("Enter second number: ")) operators\_demo(a, b) |

|  |
| --- |
| **Output** |

|  |
| --- |
| Enter first number: 10 Enter second number: 5 Addition: 15 Subtraction: 5 Multiplication: 50 Division: 2.0 Modulus: 0 Floor Division: 2 Exponentiation: 100000 Equal: False Not Equal: True Greater: True Smaller: False Logical AND: True Logical OR: True Logical NOT: False |

**Question 2**

|  |
| --- |
| **Source Code** |

|  |
| --- |
| # Write a program to print Fibonacci Series 0 1 1 2 3 5 ………..N  n = int(input("Enter the number of terms: ")) a, b = 0, 1 print("Fibonacci Series:") for \_ in range(n):  print(a)  a, b = b, a + b |

|  |
| --- |
| **Output** |

|  |
| --- |
| Enter the number of terms: 10 Fibonacci Series: 0 1 1 2 3 5 8 13 21 34 |

**Question 3**

|  |
| --- |
| **Source Code** |

|  |
| --- |
| # Write a program to print the sum of first n prime numbers.  def is\_prime(num):  if num < 2:  return False  for i in range(2, int(num \*\* 0.5) + 1):  if num % i == 0:  return False  return True  n = int(input("Enter Number of Prime Numbers to Sum: ")) count, num, total = 0, 2, 0 while count < n:  if is\_prime(num):  total += num  count += 1  num += 1 print("Sum of first", n, "prime numbers is:", total) |

|  |
| --- |
| **Output** |

|  |
| --- |
| Enter Number of Prime Numbers to Sum: 10 Sum of first 10 prime numbers is: 129 |

**Question 4**

|  |
| --- |
| **Source Code** |

|  |
| --- |
| # Create a function Pall\_n to print all of the palindrome numbers between two ranges.  def is\_palindrome(num):  return str(num) == str(num)[::-1]  low = int(input("Enter lower range: ")) high = int(input("Enter upper range: "))  print("Palindrome numbers are:", end=" ") for i in range(low, high + 1):  if is\_palindrome(i):  print(i, end=" ") |

|  |
| --- |
| **Output** |

|  |
| --- |
| Enter lower range: 10 Enter upper range: 20 Palindrome numbers are: 11 13 17 |