

Quiz 2, Sp26; Course Code: SE 121; Section: 46 N; Time: 30 Minutes; Marks: 15

1.	A mathematics training center evaluates students by allowing them to perform different mathematical operations such as addition(1), subtraction(2), multiplication(3), and division(4). The student enters two numbers and selects an operation code to perform the desired calculation. After computing the result, bonus marks are added based on performance category: Excellent students (E) receive a 10% bonus, Good students (G) receive a 5% bonus, and Average students(A) receive no bonus. Write a C program that takes the two numbers, operation code, and performance category as input, performs the selected operation using a switch-case statement, applies the appropriate bonus using decision-making statements, and displays the final result. <table><tr><th>Sample Input</th><th>Sample Output</th></tr><tr><td>Enter first number: 20 Enter second number: 10 Enter operation code: 3 Enter performance category (E/G/A): G</td><td>Final Result: 210.00</td></tr></table>	Sample Input	Sample Output	Enter first number: 20 Enter second number: 10 Enter operation code: 3 Enter performance category (E/G/A): G	Final Result: 210.00	7.5
Sample Input	Sample Output					
Enter first number: 20 Enter second number: 10 Enter operation code: 3 Enter performance category (E/G/A): G	Final Result: 210.00					

2.	A teacher wants to analyze numbers entered by students in a mathematics activity. The total number of inputs is entered by the user. For each input, the student enters a positive integer. The program should use a loop to read all the numbers one by one and determine whether each number is a prime number or not. It should also count how many prime numbers and how many non-prime numbers were entered. Finally, the program should display the total number of prime numbers and non-prime numbers.		[Marks – 7.5]
	Sample Input	Sample Output	
	Enter how many numbers: 4 Enter number 1: 5 Enter number 2: 8	5 is a Prime number 8 is Not a Prime number Total Prime Numbers: 1 Total Non-Prime Numbers: 1	