Ganpat University
U V Patel College of Engineering
B Tech Semester IV Computer Engineering/ Information Technology
(A.Y. 2025-2026)
2CEIT404: Programming with Python
Assignment -1

Q-1	Explain the difference between '/' and '//' operators in Python with respect to their output types and behavior with negative numbers.	1U
Q-2	What is the difference between bitwise and logical operators? When would you use each?	1U

Q-3	Determine the output of these expressions and explain the order of operations:
	
	x = 5
	y = 3
	z = 2
	
	# Expression 1
	result1 = x + y * z ** 2 - (x + y) / z
	
	# Expression 2
	result2 = x > y and y > z or not (x + y == 8)
	
	# Expression 3
	result3 = x & y | ~z + 1
	
	# Expression 4
	result4 = x * y // z + 3 ** 2 %
		1A

Q-4	Write a program that takes two numbers as input and swaps their values without using a temporary variable. Use both the traditional method and Python's multiple assignment method. Compare the two approaches.	1A
Q-5	Given the string "Python Programming", write code to: ● Print every alternate character ● Print the string in reverse without using the reverse function ● Count the number of vowels and consonants	1A
Q-6	Create a program that generates a multiplication table for numbers 1 to 10, but skip multiples of 3 using the continue statement. Format the output in a neat table structure.	1C
Q-7	Explain **, //, is and in operators of python.	1U

Q-8	Explain any five string methods of python with an example.	1U
Q-9	Write down similarities and differences between lists and tuples with an example.	1A
Q-10	What is the usage of tuples in python? List out operations of tuples. Explain at least two operations of tuples.	1U
Q-11	Write a program to take a string and a character as input and replace all occurrences of the character with a '*' in the string.	1A
Q-12	Write a program to find all prime numbers between two given numbers using functions and list comprehension.	1C
Q-13	Using regular expression, check entered mobile number is valid or not.	1A
Q-14	Explain concept of lambda function with usage of filter(), map(), and reduce() function.	1A