



Mid Term (Odd) Semester Examination October 2024

Roll no. 2319813

Name of the Course and semester: B.Tech. III

Name of the Paper: Python Programming

Paper Code: TCS - 346

Time: 1.5 hour

Maximum Marks: 50

Note:

- (i) Answer all the questions by choosing any one of the sub questions
- (ii) Each question carries 10 marks.

Q1 (10 marks)		
(a)	Why indentation important in Python, and what do you understand by Python syntax and semantic errors? Additionally, explain data types in Python and write a program that takes input from the user for a complex number, displaying its real and imaginary parts.	CO 1
	OR	
(b)	What is type casting? Provide examples of implicit and explicit typecasting. Also, write a program that takes a string as input, finds its length, performs string slicing, and displays the last element using negative indexing.	
Q2		
(a)	Write a Python program that uses a user-defined function to check whether a number entered by the user at runtime is an Armstrong number or not.	CO 2
	OR	
(b)	Write a Python program that uses a user-defined function to check whether a number entered by the user at runtime is a palindrome or not.	
Q3		
(a)	What is an in-built module in Python? Write a program to find the area of a circle using the Math library. Also, create a custom module to calculate the circumference and call it in another file using the import command.	CO 2
	OR	
(b)	Explain the difference between local and global variables, and provide an example demonstrating the use of a global variable within a function. Additionally, write a program that checks whether a given number is Prime by passing the number through a function.	
Q4		
(a)	Perform the following operations on a list: reverse, append, and count an element. Additionally, name two types of errors in Python and write a small code snippet to handle them using exception handling.	CO 3
	OR	
(b)	Why are tuples immutable and what occurs if you try to modify an element? Additionally, write a program to open the file 'myfile.txt' and append content to it.	
Q5		
(a)	What is file handling? Name different modes of file handling. How to read a file and write to another file in Python?	CO 3
	OR	
(b)	What are dictionary keys and values in Python? Write a code snippet to retrieving key-value pairs and keys, removing specific key-value pairs, updating a value.	