

First Semester B.E./B.Tech. Degree Examination, June/July 2025

Introduction to Python Programming

Time: 3 hrs.

Max. Marks: 100

Note: 1. Answer any FIVE full questions, choosing ONE full question from each module.

2. M : Marks , L: Bloom's level , C: Course outcomes.

Module – 1			M	L	C
Q.1	a.	Explain the different data types supported in Python with syntax and examples.	6	L2	CO1
	b.	Develop a program in Python to find the sum of n natural numbers. Read the number from user.	6	L3	CO1
	c.	Define Exception and illustrate the concept of exception handling in Python using suitable example.	8	L2	CO1
OR					
Q.2	a.	Define the rules to develop a user-defined function in Python and define a function called exchange() to swap two numbers, show the output.	6	L2	CO1
	b.	Develop a program to find the largest among the three numbers.	6	L3	CO1
	c.	Explain the syntax and example of the following statements i) for loop ii) While loop iii) if-elif-else.	8	L2	CO1
Module – 2					
Q.3	a.	List out the augmented operators and give the examples to illustrate the same.	7	L1	CO2
	b.	Write a program to show the traversing of key-value pairs in dictionaries.	7	L3	CO2
	c.	Explain the random choice and random shuffle function with lists.	6	L2	CO2
OR					
Q.4	a.	Describe Lists in Python and examples to create list, list concatenation and replication.	7	L1	CO2
	b.	Write a function named displayInventory() that would take any possible "inventory" and display it like the following : Inventory : 12 arrow, 42 gold coin, 1 rope, 6 torch, 1 dagger, Total number of items : 62.	7	L3	CO2
	c.	Explain with an example slicing, in and not in operator with strings.	6	L2	CO2
Module – 3					
Q.5	a.	Write a program to accept string and display total number of alphabets.	8	L3	CO3

	b.	Discuss various methods available to remove the white spaces in a string with examples.	6	L2	CO3
	c.	Differentiate between absolute and relative paths in specifying file paths.	6	L2	CO3
OR					
Q.6	a.	Write a program in Python to perform reading and writing operations on files.	8	L3	CO3
	b.	List the string methods to analyze strings. Explain any four with syntax and examples.	6	L2	CO3
	c.	Explain how to save and retrieve variables with the Shelve module.	6	L2	CO3
Module – 4					
Q.7	a.	Discuss how shutil module helps to perform the operations such as copy, move, rename and delete files.	8	L2	CO3
	b.	What is logging? Explain the logging levels to categorize the log messages in Python.	6	L2	CO3
	c.	Write an algorithm for implementation of multi clipboard functionality.	6	L3	CO3
OR					
Q.8	a.	Explain the backing up a folder into a zip, with a program code.	8	L2	CO3
	b.	Describe how Raise exception is done using an example.	6	L2	CO3
	c.	Differentiate between Step over, Step In and Step Out buttons in the debugger.	6	L3	CO3
Module – 5					
Q.9	a.	Differentiate between the class method and instance method with suitable program examples.	8	L3	CO4
	b.	Define a function which takes TWO objects representing complex numbers and returns new complex number with a addition of two complex numbers. Define a suitable class 'Complex' to represent the complex number. Develop a program to read N ($N \geq 2$) complex numbers and to compute the addition of N complex numbers.	8	L3	CO4
	c.	Write a <code>_str_</code> method for the Point class. Create a Point object and print it.	4	L2	CO4
OR					
Q.10	a.	Write a class with following criteria Class name : Flower Objects : Lilly, Rose, Hibiscus Attributes : price, color, smell Methods : <code>get()</code> , <code>display()</code>	8	L3	CO4
	b.	Develop a program that uses class Student which prompts the user to enter marks in three subjects and calculates total marks, percentage and displays the score card details. [Hint : Use list to store the marks in three subjects and total marks. Use <code>_init_()</code> method to initialize name, USN and the list to store marks and total. Use <code>getMarks()</code> method to read marks into the list, and <code>display()</code> method to display the score card details.	8	L3	CO4
	c.	Describe poly morphism with example.	4	L2	CO4