

**Second Semester B.E./B.Tech. Degree Examination, Dec.2025/Jan.2026**

**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.*

<b>Module – 1</b>			<b>M</b>	<b>L</b>	<b>C</b>
<b>Q.1</b>	<b>a.</b>	Explain the following functions with examples: i) input      ii) print      iii) len      iv) str	<b>08</b>	<b>L2</b>	<b>CO1</b>
	<b>b.</b>	Explain if and elif control statements with syntax and flowchart.	<b>06</b>	<b>L2</b>	<b>CO1</b>
	<b>c.</b>	Develop a program to generate Fibonacci sequence of length (N). Read N from console.	<b>06</b>	<b>L2</b>	<b>CO1</b>
<b>OR</b>					
<b>Q.2</b>	<b>a.</b>	Explain the following with example: i) Def statement with parameters ii) Parameters and Return values	<b>06</b>	<b>L2</b>	<b>CO1</b>
	<b>b.</b>	How to handle exception in python with example.	<b>05</b>	<b>L2</b>	<b>CO1</b>
	<b>c.</b>	Explain the following with syntax and example: i) for loop      ii) break      iii) continue	<b>09</b>	<b>L3</b>	<b>CO1</b>
<b>Module – 2</b>					
<b>Q.3</b>	<b>a.</b>	Explain the use of in and not in operator in list with examples.	<b>06</b>	<b>L2</b>	<b>CO2</b>
	<b>b.</b>	Explain Negative Indexing, Slicing, index( ), append( ), remove( ), pop( ), insert( ), and sort( ) with suitable example.	<b>08</b>	<b>L2</b>	<b>CO2</b>
	<b>c.</b>	Write about mutable and immutable data type in list.	<b>06</b>	<b>L2</b>	<b>CO2</b>
<b>OR</b>					
<b>Q.4</b>	<b>a.</b>	Define Dictionary. Explain the following methods of dictionary: (i) setdefault      (ii) get      (iii) keys      (iv) items	<b>10</b>	<b>L2</b>	<b>CO2</b>
	<b>b.</b>	Develop a program to read the student details like Name, USN and Marks in three subjects. Display the student details, total marks and percentage with suitable messages.	<b>10</b>	<b>L2</b>	<b>CO2</b>
<b>Module – 3</b>					
<b>Q.5</b>	<b>a.</b>	Illustrate with example opening of a file with open( ) function, reading the contents of the file with read( ) and writing to files with write( ).	<b>10</b>	<b>L2</b>	<b>CO3</b>
	<b>b.</b>	Explain how to save variable with the shelve module.	<b>10</b>	<b>L2</b>	<b>CO3</b>

OR					
Q.6	a.	Explain any 5 string methods with syntax and example.	10	L3	CO3
	b.	Explain how individual elements of a string are accessed. How to extract a part of string? Explain with examples.	10	L3	CO3
Module – 4					
Q.7	a.	Explain permanent delete and safe delete with a suitable python programming example to each.	08	L2	CO3
	b.	Develop a program to backing up a given folder (Folder in a current working directory) into a ZIP file by using relevant modules and suitable methods.	06	L3	CO3
	c.	Explain the role of Assertions in Python with a suitable program.	06	L2	CO3
OR					
Q.8	a.	Explain the functions with examples : i) Shutil.copypath()      ii) Shutil.move()      iii) shutil.rmtree()	06	L3	CO3
	b.	Develop a python program to traverse the current directory by listing subfolders and files.	06	L2	CO3
	c.	Explain the support for Logging with logging module in python.	08	L2	CO3
Module – 5					
Q.9	a.	Explain about class and objects with an example.	10	L2	CO4
	b.	Explain with example about pure function and modifier.	10	L2	CO4
OR					
Q.10	a.	Explain the methods <code>_init_</code> and <code>_str_</code> with suitable code example to each.	06	L2	CO4
	b.	Explain the program development concept 'prototype and patch' with suitable example.	06	L2	CO4
	c.	Define a function which takes two objects representing complex numbers and returns new complex number with addition of two complex numbers. Define a suitable class 'complex' to represent the complex number. Develop a program to read N ( N >= 2 ) complex numbers and to compute the addition of N complex numbers.	08	L3	CO4

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