CBCS SCHEME

USN ☐☐☐☐☐☐☐☐☐☐   **BPLCK105B/BPLCKB105**

First Semester B.E./B.Tech. Degree Examination, Dec.2023/Jan.2024
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.	List and explain the use of comparison operator in python. Write the step by step execution of the following expression in python. 3/2 * 4 + 3 + (10/4)**3 – 2	6	L1	CO1
	b.	Explain the control statements, if, else, elif with proper syntax and examples.	6	L2	CO1
	c.	Develop a python program to calculate the area and circumference of a circle input the value of radius and print the results.	8	L3	CO1
		OR			
Q.2	a.	Explain the string concatenation and string replication operator with an example.	6	L2	CO1
	b.	Explain local and global scope of variable with suitable example.	6	L2	CO1
	c.	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.	8	L3	CO1
		Module – 2			
Q.3	a.	What is list? Explain the concept of list indexing and slicing with examples.	6	L2	CO2
	b.	With suitable examples, explain the list methods append( ), extend( ), sort( ), count( ) and pop( ).	8	L2	CO2
	c.	Read N numbers from the console and create a list. Develop a program to print mean, variance and standard deviation with suitable message.	6	L3	CO2
		OR			
Q.4	a.	Define tuple data type? List out the difference between tuple and list.	6	L2	CO2
	b.	Identify and explain the dictionary methods like get( ), item( ), keys( ) and values ( ) in python with examples.	8	L2	CO2
	c.	Develop a python program to swap two numbers without using Intermediate variables. Prompt the user for input.	6	L2	CO3

		Module – 3			
Q.5	a.	Write the output of the following : i) 'HeLLo'·upper( ) · isupper ( ) ii) 'HeLLo'·upper( ) ·lower( ) iii) '__' · Join('There can be only one'·split( ))	6	L2	CO3
	b.	With examples, explain any five string methods.	6	L2	CO3
	c.	Develop a python program to count the total number of vowels, consonants in a string.	8	L3	CO3
		OR			
Q.6	a.	Make use of the concept of file handling and explain Reading and writing process with suitable python programs.	7	L2	CO3
	b.	Explain the concept of file path, also discuss absolute and relative paths.	7	L2	CO3
	c.	Briefly, explain saving variables with shelve module.	6	L2	CO3
		Module – 4			
Q.7	a.	Explain the following file operations in python with suitable examples. i) Copying files and folders ii) Moving files and folders iii) Permanently deleting files and folders	6	L2	CO3
	b.	List out the benefits of compressing file with zip file module, also explain the concepts of walking a directory tree.	8	L2	CO3
	c.	List out the difference between shutil.copy( ) and shutil.copytree( ) methods.	6	L3	CO3
		OR			
Q.8	a.	Briefly explain Assertion and raising a exception.	6	L2	CO3
	b.	Develop a python program with a function named DivExP which takes two parameters a, b and returns a value C. (C = a/b). Write suitable assertion for a > 0 in function DivExP and raise on exception for when b = 0. Program has to read two values from the console and call a function DivExP.	8	L3	CO3
	c.	Briefly explain the difference logging levels.	6	L2	CO3
		Module – 5			
Q.9	a.	Define classes and objects in Python. Construct the class called rectangle and initialize it with height = 100, width= 200, starting point as (x = 0, y = 0) and write the method to display the center point coordinates of a rectangle.	8	L2	CO4
	b.	Briefly explain the concept of prototyping and planning.	6	L2	CO4
	c.	Explain Clearly _ _init( )_ _ and _ _str( )_ _ method with examples.	6	L2	CO4
		OR			
Q.10	a.	Explain the term objects are mutable with an example.	6	L2	CO4
	b.	Explain the concept of polymorphism with examples.	8	L2	CO4
	c.	Explain briefly pure functions and modifiers with examples.	6	L2	CO4

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