

CBCS SCHEME

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1BPLC105B/205B

First/Second Semester B.E./B.Tech. Degree Examination, June/July 2026
Python Programming (for CSE and Allied programmes)

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.	Differentiate between a syntax error and a runtime error with examples.	6	L2	CO1	
	b.	What is two-dimensional table? Explain the python code for printing multiples of table 2.	6	L2	CO1	
	c.	Write the output of the following: <pre>>>>len("hello") >>>3 ** 2 >>>7 / 4 >>> 7 // 4 >>> int("23 bottles") >>> float("123.45") >>>str(123.45) >>> 2**4+1</pre>	8	L1	CO1	
OR						
Q.2	a.	What is meant by function composition? Illustrate with an example.	6	L1	CO1	
	b.	Compare the for and while loops in Python with examples.	6	L2	CO1	
	c.	Write a python code to (i) count the number of decimal digits in a positive integer. (ii) count the number of 0's or 5's in a positive integer.	8	L2	CO1	
Module – 2						
Q.3	a.	Explain mutability in lists. Illustrate the difference between modifying a list and creating a clone of it using examples.	8	L3	CO2	
	b.	Develop a program to count the number of words in a given line of text.	6	L3	CO2	
	c.	Write a code snippet to explain string format method.	6	L2	CO2	
OR						
Q.4	a.	Explain the string operations in Python for slicing, concatenation, repetition, and comparison with suitable examples.	10	L2	CO2	
	b.	What is a tuple? Give example. Also explain tuple packing and unpacking with suitable examples.	6	L2	CO2	
	c.	Write a note on find method and split method.	4	L1	CO2	

Module – 3

Q.5	a.	Define a dictionary in Python. Explain dictionary methods like key() and values().	8	L2	CO2
	b.	What is masking in NumPy? Develop a program to illustrate masking to filter array elements.	6	L3	CO3
	c.	With example differentiate reading a file line-at-a-time and Reading the whole file at once.	6	L3	CO4

OR

Q.6	a.	Explain del statement in python dictionary.	5	L2	CO2
	b.	Write a code snippet to get the shape of an array.	5	L1	CO3
	c.	Develop a program to sort the contents of a text file and write the sorted contents into a separate text file. [Hint: Use string methods strip(), len(), list methods sort(), append(), and file methods open(), readlines(), and write()]	10	L3	CO4

Module – 4

Q.7	a.	Develop python code using user defined functions to generate a list of 5 random month numbers out of 12 months with duplicity and without duplicity.	8	L3	CO3
	b.	Define Scope and explain the different scopes in python. Also explain the lookup rules with examples.	6	L2	CO3
	c.	Describe the three import statement variants with suitable examples.	6	L2	CO3

OR

Q.8	a.	Explain mutable versus immutable data types. Also explain the concept of aliasing with example.	8	L2	CO3
	b.	Explain __init__() and __str__() methods with examples.	6	L2	CO3
	c.	Develop a Python program to create your own module with one function and import it in another file.	6	L3	CO3

Module – 5

Q.9	a.	Explain the concept of sameness using is and == operator.	6	L2	CO5
	b.	Describe deepcopy() and shallowcopy() with suitable code example.	6	L2	CO5
	c.	Define Polymorphism with a suitable python program.	8	L2	CO5

OR

Q.10	a.	Explain the concept of operator overloading in Python. With suitable code snippets, demonstrate how the + operator is overloaded for a user-defined MyTime class. Also explain how the * operator can be overloaded using both __mul__() and __rmul__() methods in a Point class.	10	L2	CO5
	b.	Define Classes and Objects in python. Construct a 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.	10	L2	CO5