

**PSG COLLEGE OF ARTS & SCIENCE
(AUTONOMOUS)**

**BSc DEGREE EXAMINATION MAY 2026
(Fourth Semester)**

Branch- ELECTRONICS

PYTHON PROGRAMMING AND APPLICATIONS

Time: Three Hours

Maximum: 75 Marks

SECTION-A (10 Marks)

Answer ALL questions

ALL questions carry EQUAL marks (10 × 1 = 10)

Module No.	Question No.	Question	K Level	CO
1	1	Which of the following is not a valid Python identifier? a) sum_avg b) 2value c) value_2 d) result	K1	CO1
	2	Why tuple considered as an immutable data type? a) holds only numbers b) cannot change after creation c) faster than a list d) becomes list if changed	K2	CO3
2	3	What is a function with no name called in Python? a) lambda b) recursive c) built-in d) user-defined	K1	CO2
	4	Which statement describes recursion in Python? a) A function that calls itself b) A function forms loop c) A function runs in parallel d) A function defined inside another function	K2	CO2
3	5	Which operator is used for string concatenation in Python? a) + b) * c) % d) /	K1	CO3
	6	If numbers = [10, 20, 30], what is the result of numbers[-1]? a) 20 b) 30 c) 10 d) Nothing	K2	CO3
4	7	How do you create an empty dictionary? a) {} b) {} c) [] d) dict[]	K1	CO3
	8	What does len((1, (2,3), 4)) return? a) 4 b) 3 c) 2 d) 1	K2	CO3
5	9	Which mode opens a file for reading only? a) "r" b) "w" c) "a" d) "rw"	K1	CO4
	10	Which statement about user-defined exceptions is correct? a) inherit from exception b) simple strings c) faster than built-in d) cannot have messages	K2	CO4

SECTION - B (35 Marks)

Answer ALL questions

ALL questions carry EQUAL Marks (5 × 7 = 35)

Module No.	Question No.	Question	K Level	CO
1	11.a.	Compare an identifier and a variable with suitable examples.	K2	CO1
		(OR)		
	11.b.	Summarize three basic string operations.		

Cont...

2	12.a.	Identify the key features of anonymous function in Python.	K3	CO2
	(OR)			
	12.b.	Develop a Python program that demonstrate the use of nested function.		
3	13.a.	Construct an explanation of the string formatting operator with examples.	K3	CO3
	(OR)			
	13.b.	Plan a Python program to apply the concept of string immutability.		
4	14.a.	Analyze why tuples are immutable? Give an example.	K4	CO3
	(OR)			
	14.b.	Examine the process of creating a dictionary and describe how to access its values with an example.		
5	15.a.	Analyze and examine the key file object attributes in Python.	K4	CO4
	(OR)			
	15.b.	Examine and analyze some common built-in exceptions in Python.		

SECTION -C (30 Marks)Answer **ANY THREE** questions**ALL** questions carry **EQUAL** Marks

(3 × 10 = 30)

Module No.	Question No.	Question	K Level	CO
1	16	Examine how a while loop in Python works for different boundary cases and iterative patterns.	K4	CO1
2	17	Evaluate a recursive function in Python and its iterative equivalent.	K5	CO2
3	18	Survey and compare Python list methods for their functionality and efficiency.	K4	CO3
4	19	Determine why dictionary keys must be immutable in Python with an example.	K5	CO3
5	20	Discuss about the concept of exceptions with arguments with a program.	K4	CO4

Z-Z-Z END