

PSG COLLEGE OF ARTS & SCIENCE
(AUTONOMOUS)

BSc DEGREE EXAMINATION DECEMBER 2025
(Fourth Semester)

Branch - COMPUTER TECHNOLOGY

PYTHON PROGRAMMING

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 used to create a list in Python? a) [] b) {} c) () d) set()	K1	CO1
	2	How do you declare a function in Python? a) function func(): b) def func(): c) function def func(): d) declare func():	K2	CO1
2	3	Which method removes and returns the last item from the list? a) remove() b) pop() c) del() d) discard()	K1	CO2
	4	Which of the following is a characteristic feature of tuples in Python? a) Tuples are mutable b) Tuples can store mixed data types c) Tuples cannot be nested d) Tuples can only store integers	K2	CO2
3	5	In Python, how can you make a class attribute private? a) __attribute b) attribute__ c) private attribute d) attribute*	K1	CO3
	6	In Python, when does garbage collection occur? a) When the program ends b) When the del statement is used c) Automatically when there are no references to an object d) Never, Python doesn't have garbage collection	K2	CO3
4	7	is Composition in the context of Python classes. a) It refers to a class inheriting methods and attributes from another class b) It refers to the practice of creating objects within objects (has-a relationship) c) It involves overriding methods of the base class in the child class d) It is used for hierarchical inheritance	K1	CO4
	8	Which method will you overload to implement the behavior of the * (multiplication) operator in a Python class? a) __mult__ b) __mul__ c) times d) multiplication	K2	CO4
5	9	What are the two main types of files you can work with in Python? a) .txt and .csv files b) .txt and .bin files c) Text files and Binary files d) .json and .xml files	K1	CO5
	10	Which Python keyword is used to raise an exception explicitly? a) throw b) raise c) catch d) except	K2	CO5

Cont...

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.	Summarize the various operator supported by Python. (OR)	K3	CO1
	11.b.	Explain how to use Modules in Python with an example?		
2	12.a.	Determine the basic operation and methods used in List. Give an example. (OR)	K3	CO2
	12.b.	Write a Python program to find repeated items in a tuple.		
3	13.a.	Explain how you can create and access values in a dictionary in Python. Provide an example. (OR)	K4	CO3
	13.b.	How do you define a class and create objects in Python? Give an example.		
4	14.a.	Analyze how to inherit the class in Python? Give an example. (OR)	K4	CO4
	14.b.	How does reverse addition (<code>__radd__</code>) work in Python operator overloading? Provide an example.		
5	15.a.	Summarize the different modes available for opening a file in Python (OR)	K5	CO5
	15.b.	Determine the Built-in Exceptions used 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	Write a Python function to check whether a number falls within a given range.	K3	CO1
2	17	Construct how you can use lists in Python for stack and queue operations? Provide an example for each.	K3	CO2
3	18	Illustrate the some common built-in dictionary functions and methods in Python with an example.	K5	CO3
4	19	Create a class Employee with basic attributes like name and salary. Create a subclass Manager that adds an attribute <code>team_size</code> and a method <code>increase_salary()</code> to increase the salary of the employee by a given percentage. Demonstrate inheritance and method extension by creating an object of Manager and invoking the <code>increase_salary()</code> method.	K4	CO4
5	20	Write a Python program that prompts the user to input two numbers and raises a <code>TypeError</code> exception if the inputs are not numerical.	K5	CO5