23CAU417N

PSG COLLEGE OF ARTS & SCIENCE
(AUTONOMOUS)

BCA DEGREE EXAMINATION MAY 2025
(Fourth Semester)

Branch – **COMPUTER APPLICATIONS**

PYTHON FOR COMPUTER 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	What is the primary goal of computational problem solving? a) Maximizing hardware usage b) Achieving efficient solutions c) Minimizing programming effort d) Reducing software costs	K1	CO1
	2	Which of these is NOT a Python data type? a) String b) Literal c) List d) Dictionary	K2	CO1
2	3	Which of the following is a selection control structure in Python? a) for loop b) while loop c) if statement d) None of the above	K1	CO2

	4	What is the output of the following code?
		`for i in range(3):`
		`  print(i)`
		a) 0 1 2 b) 1 2 3 c) 0 1 2 3 d) None of the above
			K2	CO2

3	5	Which keyword is used to define a function in Python? a) def b) func c) lambda d) function	K1	CO3
	6	What is the default return value of a Python function that does not return anything explicitly? a) None b) 0 c) False d) Undefined	K2	CO3
4	7	Which of the following modules in Python is used for turtle graphics? a) turtle b) matplotlib c) graphics d) tkinter	K1	CO4
	8	What is a key advantage of modular design in Python? a) Reduces the size of code b) Improves code reusability c) Increases execution speed d) None of the above	K2	CO4
5	9	Which method is used to add a key-value pair to a dictionary in Python? a) append() b) insert() c) update() d) add()	K1	CO5
	10	What does the "union" operation do in sets? a) Removes common elements b) Combines all elements from both sets c) Finds elements present in both sets d) None of the above	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.	Apply the process of computational problem solving with examples.	K3	CO5
		(OR)		
	11.b.	Experiment with literals, variables, and identifiers in Python, and explain their differences with examples.		
2	12.a.	Analyze the difference between definite and indefinite loops in Python with examples.	K4	CO4
		(OR)		
	12.b.	Examine, how multi-way selection is implemented using Python's if-elif-else statements. Provide a relevant example.		
3	13.a.	Compare the difference between value-returning and non-value-returning functions in Python with examples.	K4	CO4
		(OR)		
	13.b.	Write a Python program that demonstrates the use of keyword arguments and default arguments in a function.		
4	14.a.	Solve the steps involved in connecting to a database and performing basic CRUD operations using Python.	K3	CO4
		(OR)		
	14.b.	Organize the concept of modular programming in Python. Illustrate with an example using multiple modules.		
5	15.a.	Inspect the key characteristics of dictionaries in Python. Provide an example demonstrating dictionary manipulation.	K4	CO5
		(OR)		
	15.b.	Classify set operations in Python, including union, intersection, and difference, with examples.		

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	Criticize operators, expressions, and data types in Python with appropriate examples. Highlight the importance of each in programming.	K4	CO5
2	17	Write a Python program to manipulate strings, lists, and dictionaries using loops. Explain the code and its output.	K4	CO5
3	18	Enumerate functions in Python and explain their significance in modular programming. Write a program that uses multiple functions.	K4	CO5
4	19	Perceive the process of handling exceptions in Python. Highlight its significance with examples.	K4	CO5
5	20	Eradicate the characteristics of dictionaries and sets in Python. Explain how they are used to store and manipulate data efficiently.	K4	CO5

Z-Z-Z END