



**GANDHI INSTITUTE OF ENGINEERING AND TECHNOLOGY,  
ODISHA, GUNUPUR  
(GIET UNIVERSITY)**

B.C.A (Fourth Semester) Regular Examinations, April – 2025

**BCA23401 – Fundamentals of Python Programming**

(B.C.A)

Time: 3hrs

Maximum: 60 Marks

**(The figures in the right hand margin indicate marks)**

**PART – A**

**(2 x 5 = 10 Marks)**

Q.1. Answer **ALL** questions

	CO #	Blooms Level
a. Define identifiers in Python with an example.	CO1	K1
b. Justify the role indentation in Python?	CO1	K2
c. Write a Python multi-line statement that adds three numbers and prints the result.	CO1	K3
d. Define mutable and immutable data types in Python with examples.	CO2	K2
e. Differentiate between break and continue with an example	CO3	K2

**PART – B**

**(10 x5=50 Marks)**

Answer **ALL** questions

	Marks	CO #	Blooms Level
2. a. Write a Python program to swap two values using multiple assignments.	5	CO1	K3
b. Describe any five-string functions in Python. Write a program to demonstrate the use of these functions.	5	CO2	K2
(OR)			
c. Write a Python program to demonstrate all types of conversions between different standard data types.	5	CO2	K3
d. Explain the use of bitwise operators in Python with the help of a program. Include the use of AND, OR, Left Shift, and Right Shift.	5	CO2	K3
3.a. Implement a Python program to print the Fibonacci sequence using a while loop.	5	CO2	K3
b. Develop a program that uses a lambda function and filter() to find all even numbers in a list. Explain the output.	5	CO4	K3
(OR)			
c. Explain list comprehension in Python. Write a program using list comprehension to generate a list of squares of all odd numbers from 1 to 20.	5	CO4	K3
d. Discuss the syntax and usage of functions in Python. Explain with an example showing default parameters and keyword arguments.	5	CO3	K2
4.a. Differentiate between positional and variable-length arguments in Python functions with an example.	5	CO3	K2
b. Design a Python class BankAccount with data members for the account holder's name, account number, and balance. Include methods for deposit, withdrawal, and display by creating an object.	5	CO2	K3
(OR)			
c. Create a Python program to find the factorial of a number using both for and while loops.	5	CO3	K3

d.	Explain the set operations (intersection, union, difference, symmetric difference) with an example.	5	CO3	K3
5.a.	Write a Python program to copy the contents of one file to another.	5	CO4	K4
b.	Discuss various types of built-in exceptions. Explain exception handling using try-except blocks with examples.	5	CO2	K2
(OR)				
c.	Differentiate between reading a file using read(), readline(), and readlines() with an example.	5	CO2	K2
d.	Explain the else block with try-except-finally blocks.	5	CO2	K2
6.a.	Explain the process of connecting a Python application with a MySQL/PostgreSQL database using suitable libraries. Include code snippets.	5	CO2	K1
b.	Demonstrate how to insert multiple records into a table using Python and SQL.	5	CO3	K3
(OR)				
c.	Write a Python script to connect to a database and create a table to store student records. Explain each step of the code.	5	CO2	K3
d.	Develop a Python application that updates and deletes specific entries from a table based on user input.	5	CO3	K3

--- End of Paper ---