

6Gandhi Institute of Engineering and Technology University, Odisha, Gunupur (GIET University)



B. Tech (Fourth Semester - Regular) Examinations, April 2026 23BCSES24002 - Fundamentals of Python Programming ECE(VLSI)

Time: 3 hrs

Maximum: 60 Marks

Answer ALL questions
(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. Distinguish between a List and a Tuple in Python with suitable examples.	CO1	K2
b. Demonstrate a Python program to enter two numbers and swap them using bitwise operators.	CO1	K3
c. Define the write() and writelines() methods in Python file handling.	CO4	K2
d. Write the syntax for a try-except block.	CO5	K1
e. What is the purpose of the close() method in database connectivity?	CO6	K2

PART – B**(10 x 5 = 50 Marks)**Answer **ALL** the questions

	Marks	CO #	Blooms Level
2. a. Write a Python program to count the number of occurrences of each character present in a given string. Example: Input: ABCABCABBCDE	5	CO1	K1
b. Explain the different methods used by the List (). Illustrate through examples. (OR)	5	CO1	K2
c. Construct a Python program to use lambda function with filter() to extract even numbers from a list.	5	CO3	K3
d. Explain the purpose of loop control statements: break, continue, pass, and else with examples.	5	CO2	K2
3.a. Explain the different methods available in Python to remove items from a dictionary with suitable programming examples.	5	CO1	K2
b. Implement a program in Python to enter three sides of a triangle. Find out the area of the triangle. (OR)	5	CO2	K3
c. Interpret positional and default arguments in a function with an example.	5	CO3	K2
d. Write a Python program using if-else to check whether a given alphabet is a vowel or a consonant. a. Consider vowels as: a, e, i, o, u. b. Also, draw a flowchart to represent the logic of your program.	5	CO2	K3
4.a. Describe the read (), readline(), and readlines() functions with examples.	5	CO4	K2
b. Demonstrate a Python program to copy the content of file.txt into file3.txt. (OR)	5	CO4	K3
c. Demonstrate a Python program to handle multiple exceptions (ZeroDivisionError and ValueError) using multiple except blocks.	5	CO5	K3
d. Develop a Python program to demonstrate a user-defined exception, TooYoungError, that checks whether a person is eligible to vote or not.	5	CO5	K3

5.a.	Explain different types of inheritance in Python with suitable diagrams.	5	CO5	K2
b.	Develop a program to demonstrate method overriding in Python.	5	CO5	K3
(OR)				
c.	Develop a Python program to connect to two different databases and fetch all records from tables in both databases.	5	CO6	K3
d.	Explain the basic steps involved in Python database programming. Illustrate each step with suitable examples.	5	CO6	K2
6.a.	Explain the concept of constructor and its types in Python with examples.	5	CO5	K2
b.	Describe the usage of try, except, else, and finally blocks with examples.	5	CO5	K2
(OR)				
c.	Explain the Python program to create a database in MySQL with a suitable example.	5	CO6	K3
d.	Construct a Python program to update records from a MySQL database table based on user input.	5	CO6	K3

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