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



B. Tech (Fourth Semester – Regular/Supplementary) Examinations, April 2026 23BCSPC24002- Fundamentals of Python Programming (CSE)

Time: 3 hrs

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. Differentiate between identity and membership operators with examples. | CO1 | K2 |
| b. What is the significance of indentation in Python? What error occurs if it is violated? | CO1 | K2 |
| c. Explain the use of <code>else</code> with loops in Python. | CO2 | K3 |
| d. What is a generator function? How is it different from a normal function? | CO2 | K4 |
| e. Define exception hierarchy. Give two examples. | CO4 | K1 |

PART – B

(10 x 5 = 50 Marks)

Answer **ALL** the questions

- | | Marks | CO # | Blooms Level |
|--|-------|------|--------------|
| 2. a. Write a Python program to perform all arithmetic operations on two numbers and display results. | 5 | CO1 | K3 |
| b. Write a program to demonstrate multiple assignment and type conversion. | 5 | CO1 | K3 |
| (OR) | | | |
| c. Explain operator precedence with an example program. | 5 | CO1 | K4 |
| d. Write a Python program to find the largest of three numbers using conditional statements. | 5 | CO2 | K3 |
| 3.a. Write a Python program using a <code>for</code> loop to print all prime numbers between 1 and 50. | 5 | CO2 | K4 |
| b. Write a program demonstrating the use of <code>break</code> , <code>continue</code> , and <code>pass</code> . | 5 | CO2 | K3 |
| (OR) | | | |
| c. Write a recursive function to calculate factorial of a number. | 5 | CO2 | K4 |
| d. Explain <code>lambda</code> , <code>map</code> , and <code>filter</code> with suitable programs. | 5 | CO2 | K5 |
| 4.a. Write a Python program to read a file and count number of words and lines. | 5 | CO3 | K3 |
| b. Write a program to write and read CSV file data. | 5 | CO3 | K4 |
| (OR) | | | |
| c. Write a Python program using <code>regex</code> to validate email format. | 5 | CO3 | K5 |
| d. Explain OOP concepts with a program demonstrating class and object. | 5 | CO3 | K2 |
| 5.a. Write a Python program demonstrating exception handling with multiple <code>except</code> blocks. | 5 | CO4 | K3 |
| b. Write a program demonstrating thread creation using <code>Thread</code> class. | 5 | CO4 | K4 |
| (OR) | | | |
| c. Explain daemon threads and synchronization using <code>Lock</code> with example. | 5 | CO4 | K5 |
| d. Write a Python program to demonstrate <code>try-except-else-finally</code> . | 5 | CO4 | K3 |
| 6.a. Write a Python program to connect to MySQL database and fetch records. | 5 | CO5 | K3 |
| b. Create a simple Tkinter GUI with a button and text input. | 5 | CO5 | K4 |
| (OR) | | | |
| c. Write a Python program to insert and retrieve data from a database. | 5 | CO5 | K5 |
| d. Design a simple GUI with checkboxes and radio buttons. | 5 | CO5 | K6 |

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