



# CBCS SCHEME

18BT36

## Third Semester B.E. Degree Examination, June/July 2025 Python Programming

Time: 3 hrs.

Max. Marks: 100

*Note: Answer any FIVE full questions, choosing ONE full question from each module.*

### Module-1

- 1 a. Explain the salient features of algorithm and flowchart. (06 Marks)
- b. Draw a flowchart to print the largest among three different numbers entered by the user. (07 Marks)
- c. Explain the symbols and rules for drawing flowchart with example. (07 Marks)

OR

- 2 a. Explain and write an algorithm to find the minimum number in a list. (07 Marks)
- b. Explain the Towers of Hanoi problem and describe the algorithm of towers of Hanoi problem. (10 Marks)
- c. Explain various datatypes with examples. (03 Marks)

### Module-2

- 3 a. Explain the differences between Python interpreter and interactive mode. (06 Marks)
- b. Explain the precedence of operations in Python. (06 Marks)
- c. Explain the important rules and use of tuple assignment with examples. (08 Marks)

OR

- 4 a. Write a python function to swap the value of two variables. (05 Marks)
- b. Explain the need of user defined functions in Python with examples. (10 Marks)
- c. Explain parameters and arguments with simple example. (05 Marks)

### Module-3

- 5 a. Explain with an example program how to calculate the distance between two points in 2D space. (08 Marks)
- b. Write a python program to find the factorial of a given number. (08 Marks)
- c. Explain the conditional statements with examples. (04 Marks)

Important Note : 1. On completing your answers, compulsorily draw diagonal cross lines on the remaining blank pages.  
2. Any revealing of identification, appeal to evaluator and /or equations written eg, 42+8 = 50, will be treated as malpractice.

OR

- 6 a. Write a string slicing logic for the following :  
i) Reverse a string using slicing  
ii) Slice from the end  
iii) Remove first and last character  
iv) Basic string slicing  
v) Extract substring (10 Marks)
- b. Explain with an example while loop, break and continue statement in Python. (10 Marks)

**Module-4**

- 7 a. Explain local and global scope with example program. (07 Marks)
- b. Explain recursion in Python with an example. (07 Marks)
- c. Write a Python program to perform binary search. (06 Marks)

OR

- 8 a. Illustrate a program to sum an array of numbers. (06 Marks)
- b. Explain various list methods with an example. (07 Marks)
- c. Explain the following :  
i) Mutability in Python  
ii) Aliasing in Python (07 Marks)

**Module-5**

- 9 a. Explain tuple assignment and tuple unpacking work with examples. (07 Marks)
- b. Explain various Dictionary operations with examples. (07 Marks)
- c. Explain creating a list of squares and conditional list comprehension. (06 Marks)

OR

- 10 a. Illustrate the program selection sort. (07 Marks)
- b. Explain and write the program merge sort. (07 Marks)
- c. Explain the basic histogram with matplotlib. (06 Marks)

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