

--	--	--	--	--	--	--	--	--	--

## Third Semester B.E. Degree Examination, Dec.2019/Jan.2020 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. What is an algorithm? Explain with an example. What are the building block of algorithms? (10 Marks)
- b. Outline the 'Tower of Hanoi' problem with the help of figure. Suggest an algorithm to solve the Tower of Hanoi problem with relevant diagrams. (10 Marks)

**OR**

- 2 a. What is flowchart and what is the purpose of it. Along with description list and draw the common symbols used in flowchart. Illustrate with an example. (10 Marks)
- b. What is Pseudocode? Explain the common keywords used in pseudocode. Write a Pseudocode for finding the minimum in a list. (10 Marks)

### Module-2

- 3 a. What is Interpreter and compiler? Write the differences between them. Explain how python works in interactive mode and script mode with examples. (10 Marks)
- b. Summarize the precedence of mathematical operators in python with examples. (10 Marks)

**OR**

- 4 a. What is User defined functions? Explain the structure and syntax of user defined functions in python with example. (10 Marks)
- b. Write a python function using arguments and return types for addition of two numbers. Call this function and display the result. Comment each line with explanation. (10 Marks)

### Module-3

- 5 a. What is Module in Python? How to use module in a program? Write a program to find the distance between two points. Explain each line using python comments. (10 Marks)
- b. Python strings are Immutable. Justify with an example. (10 Marks)

**OR**

- 6 a. Appraise with an example 'nested if' and 'elif' header in python. (10 Marks)
- b. Explain with an example while loop, 'break' statement and 'continue' statement in python. (10 Marks)

### Module-4

- 7 a. Write a python program to perform linear search on a list. (10 Marks)
- b. Briefly describe the operations on list with relevant codes. (10 Marks)

**OR**

- 8 a. Write any five methods that operate on list with examples. (10 Marks)
- b. What is fruitful function? Explain with an example compare fruitful function with void function. (10 Marks)

### Module-5

- 9 a. What is a dictionary in python? Give examples. (10 Marks)
- b. Briefly describe with codes the various operations on dictionary. (10 Marks)

**OR**

- 10 a. Write a python program to sort 'n' numbers using selection sort. (10 Marks)
- b. Demonstrate with code the various operations that can be performed on tuples. (10 Marks)