



CBCS SCHEME

21BT42

Fourth Semester B.E. Degree Examination, June/July 2024

Python Programming + Lab

Time: 3 hrs.

Max. Marks: 100

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

Module-1

- 1 a. Explain building blocks of Algorithms in detail. (08 Marks)
- b. Asses algorithm problem solving method with neat diagram. (09 Marks)
- c. Differentiate between algorithm, flowcharts and pseudocode. (03 Marks)

OR

- 2 a. List and explain the notations of algorithm with neat sketch. (08 Marks)
- b. Write algorithm, flowchart for finding factorial of given numbers. (06 Marks)
- c. Write algorithm and pseudocode to find the minimum and maximum in a list. (06 Marks)

Module-2

- 3 a. Explain in detail about various data types of in python with an example. (10 Marks)
- b. Discuss the different modes of python interpreter. (05 Marks)
- c. Write a python program to perform arithmetic operations on integers using functions. (05 Marks)

OR

- 4 a. Explain different types of operators in python with an example. (10 Marks)
- b. Write a program to convert degree Fahrenheit to Celsius and Vice versa. (05 Marks)
- c. i) Differentiate between mutable and immutable objects in python.
ii) Guess the output of the following snippet
dy detail (name, age, grade) :
Print ("name of the student is", name)
Print ("age of the student is", age)
Print ("grade of the student is", grade)
Details ("santhosh", age = 12, 6) (05 Marks)

Module-3

- 5 a. Write a python program to find the larger of three numbers. (06 Marks)
- b. Explain nested conditional statements in detail with an example. (06 Marks)
- c. Write a short note on : (08 Marks)
i) Boolean operators and values ii) String methods

OR

- 6 a. Explain Iteration concept with an example. (10 Marks)
- b. Write a python program to circulate the values of n variables. (06 Marks)
- c. Write a python program to count the number of characters present in a word. (04 Marks)

Module-4

- 7 a. Write a short note on Local and global scope. (04 Marks)
- b. Create a list and explain different list methods with an example. (10 Marks)
- c. Illustrate the python program to find the sum an array of numbers. (06 Marks)

OR

- 8 a. Write a python program to perform linear search operation. (07 Marks)
 b. Write a short note on cloning lists with an example. (05 Marks)
 c. i) Write a short note on : i) Mutability ii) Aliasing
 ii) Guess the output of the following code snippet
 1) for i in "my blog" :
 print (i, '?')
 2) List = [50, 70, 30, 20, 90, 10, 50]
 print (List [-7 : : 1]) (08 Marks)

Module-5

- 9 a. Create a tuple. Explain tuple assignment with an example. (06 Marks)
 b. Write a python program to perform selection sort operation. (08 Marks)
 c. Explain how list comprehension can be done in python with example. (06 Marks)

OR

- 10 a. Explain how to create dictionary in python and explain how different operations can be performed on it using built in method. (08 Marks)
 b. Describe Histogram, create and explain histogram with the help of code. (06 Marks)
 c. i) My string = "hello world!"
 K = [(i.upper(), len(i)) for i in my-string]
 Print (k)
 ii) Print ([i + j for i in "abc" for j in "dy"])
 iii) Print ([if i%2== 0 : i ; else : i+1 ;
 for i in range (4)]) (06 Marks)
