21BT42

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Fourth Semester B.E. Degree Examination, June/July 2023
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. Define Algorithm. Explain with an example building block of an algorithm. **(10 Marks)**
   b. What is flowchart and describe the purpose of it along with the symbols used to draw flowchart. Illustrate with an example. **(10 Marks)**

OR

2 a. Explain simple strategies for developing an algorithm. **(10 Marks)**
   b. Discuss the Fourier of Honoi problem with an algorithm and flowchart. **(06 Marks)**
   c. Illustrate the two differences between algorithm, flowchart and Pseudocode. **(04 Marks)**

Module-2

3 a. List the difference between interactive mode and script mode with an example. **(06 Marks)**
   b. What is identifier? And list the rules to name identifier. **(06 Marks)**
   c. Define string. Explain the operations in string with an example. **(08 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. Explain the rules of precedence used by python to evaluate mathematical expression. **(04 Marks)**
   c. Write a program to create, concatenate and print a string and accessing substring from a given string. **(06 Marks)**

Module-3

5 a. Explain conditional statements in detail with example. **(10 Marks)**
   b. Explain with an example while loop, 'break statement' and 'continue' statement in python. **(10 Marks)**

OR

6 a. Explain string built in functions and methods in detail. **(10 Marks)**
   b. Discuss with an example about function composition. **(06 Marks)**
   c. Write a program to find the distance between two points. **(04 Marks)**

Module-4

7 a. What are lists? Lists are mutable. Justify the statement with examples. **(08 Marks)**
   b. Write a python program to define a function to find Fibonacci numbers. **(04 Marks)**
   c. Explain in detail about advanced list processing. **(08 Marks)**

OR

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

Module-5

9 a. Explain tuples as return values with examples. (08 Marks)
   b. Explain selection sort with example. (06 Marks)
   c. What is cloning? Explain it with example. (06 Marks)

OR

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

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