18MCA32

USN ☐☐☐☐☐☐☐☐☐☐

Third Semester MCA Degree Examination, Feb./Mar. 2022
Programming Using Python

Time: 3 hrs.   Max. Marks: 100

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

Module-1

1 a. List and explain with example binary and unary operation of python. **(06 Marks)**
   b. Construct memory model for each line of code
      >>> difference = 20
      >>> double = 2 * difference
      >>> difference = 5 **(08 Marks)**
   c. Explain with example augmented assignment operators of python. **(06 Marks)**

OR

2 a. With suitable example, explain the steps of designing a function. **(10 Marks)**
   b. Explain with example python escape sequences and creating multiline string and comments. **(10 Marks)**

Module-2

3 a. Write a python program to accept a number from the keyboard and check whether the input number is zero, positive or negative and display appropriate message. Draw the flow chart. **(08 Marks)**
   b. Write a python program to create a module to add two members and how to import that module in python and use it? **(06 Marks)**
   c. List and explain with example relational operator of python. **(06 Marks)**

OR

4 a. Explain with example any ten string methods. **(10 Marks)**
   b. Using built-in function of string, write a program to find whether the given string is palindrome or not. **(06 Marks)**
   c. Write a program to replace 'shiney' with 'twinkle' for the string 'shiney shiney litter star' **(04 Marks)**

Module-3

5 a. For a given list of colors = ['red', 'orange', green'] perform the following operations on the resulting list add 'black' and 'blue' both at the end of colors list insert 'purple' at the end, insert 'yellow' at the third position, remove 'black', empty the entire list. **(10 Marks)**
   b. For a given list L = [100, 10, 50, 20, 80] find length L, biggest element of L, smallest element of L, sum of L and sort L. **(10 Marks)**

OR

6 a. Write a program to find, separately sum of positive numbers and negative numbers for an input array of n numbers. **(07 Marks)**
   b. Write a program to search an element using linear search. **(07 Marks)**
   c. Write a program to multiply two matrices. **(06 Marks)**

Module-4

7   a. Write a event driven python program for file operations Press
        1 : to open file in read mode
        2 : Open the file in write mode
        3 : current position of the file pointer
        4. Reposition the pointer at the beginning
        5: exit.   **(10 Marks)**
    b. Explain with example different techniques for reading files.   **(10 Marks)**

OR

8   a. Given set A = {0, 1, 2, 3, 4, 9} and
                set B = {1, 3, 5, 7, 9}.
        Perform all set operations and show the output.   **(10 Marks)**
    b. Write a program to invert a given dictionary
        bird_obs{'canadagoose':5'fulmar':1,
        'jaegar':2, 'snowgoose' : 1} and
        display the inverted dictionary bird_obs.   **(10 Marks)**

Module-5

9   a. Write an object oriented python program to create two Time objects and add those two time
        objects and display the sum of those two time objects using print time function.   **(08 Marks)**
    b. Write a python program to demonstrate inheritance.   **(06 Marks)**
    c. Write a python program to demonstrate constructor and destructor.   **(06 Marks)**

OR

10 a. Write a program to create frame and place labels in them.   **(08 Marks)**
    b. Write a program to demonstrate the use of lambda function.   **(06 Marks)**
    c. Write a program to create simple menu driven [File – save, Quit] text editor.   **(06 Marks)**

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