USN ☐☐☐☐☐☐☐☐☐☐   16/17MCA21

Second Semester MCA Degree Examination, Dec.2018/Jan.2019
Python Programming

Time: 3 hrs.   Max. Marks: 80

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

Module-1

1   a.   What is debugging? Explain the various types of errors that can occur in a program.
                                                                                (08 Marks)

   b.   Trace the function call and explain the memory model for the code.
```
def f(x) :
 x = 1 * x
return x
x = 2
x = f(x + 3)
```
                                                                                (08 Marks)

OR

2   a.   Explain a function definition in python with its execution sequence.   **(08 Marks)**

   b.   With the help of a neat diagram, explain how does the computer run a python program.
                                                                                (06 Marks)

   c.   Predict the output of the given code and justify your answer:
```
Fruit = "Pineapple"
Fruit[ 1 ] = "y"
Fruit = "Apple"
Print (fruit)
```
                                                                                (02 Marks)

Module-2

3   a.   Write a program to search an element using linear search.   **(04 Marks)**

   b.   Predict the output of the given code and justify your answer:
        (i) $10**2 > 8\%1 + 95$ and $5\%3! = 5/3$
        (ii)   not 0.0   **(04 Marks)**

   c.   Explain any eight string methods with example for each?   **(08 Marks)**

OR

4   a.   Explain the two ways of importing a module? Which one is more beneficial?   **(08 Marks)**

   b.   Write a python program to find the roots of a quadratic equation.   **(08 Marks)**

Module-3

5   a.   Explain any eight list methods with example.   **(08 Marks)**

   b.   Explain the controlling of loops using break and continue with example. **(08 Marks)**

OR

6   a.   What is a list of lists? Give an example with its memory model.   **(04 Marks)**

   b.   List the various operations on lists.   **(04 Marks)**

   c.   Write a python program to multiply two matrices.   **(08 Marks)**

Module-4

7   a. Explain the various techniques for reading files with example.   (08 Marks)
    b. What are sets in python? Explain any five set operations.   (08 Marks)

OR

8   a. Write a python program to read a word and print the number of letters, vowels and percentage of vowels in the word using dictionary?   (08 Marks)
    b. What is a dictionary? Mention its uses with the help of dictionary operations?   (08 Marks)

Module-5

9   a. Explain MVC design with the help of tkinter program?   (08 Marks)
    b. What is tkinter? Explain various tkinter widgets with an example.   (08 Marks)

OR

10 a. Write an object oriented python program to create two Timeobjects : currentTime and breadtime, which contains the amount of time to make bread. Use addTime to figure out when the bread will be done. Use printTime function to display the time to prepare the bread.   (08 Marks)
    b. With an example, discuss the different components of a tkinter program. (08 Marks)

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