CBCS SCHEME

USN [ ][ ][ ][ ][ ][ ][ ][ ][ ]   16MCA21

Second Semester MCA Degree Examination, Dec.2017/Jan.2018
Python Programming

Time: 3 hrs.   Max. Marks: 80

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

Module-1

1 a. Explain the two ways to use the Python interpreter.   (04 Marks)
   b. Give the outputs of the following expressions:
      i) 54//17   ii) −17//10   iii) −16%5   iv) 17 % −10   (04 Marks)
   c. What are the errors that can be detected by Python? Differentiate between them with one
      example each.   (04 Marks)
   d. Discuss about the importance of descending the code. Give an example.   (04 Marks)

OR

2 a. Trace the function calls in the following code by using the memory model:
      def f(x) :
          x = 2 * x
          return x
      x = 1
      x = f(x + 1) + f(x + 2)   (10 Marks)
   b. Demonstrate any 4 operations on strings.   (04 Marks)
   c. Explain the usage of keyword arguments "end" and "sep".   (02 Marks)

Module-2

3 a. Discuss about the process of combining comparisons. Write a short note on short circuit
      evaluation performed by Python when evaluating combined comparisons.   (08 Marks)
   b. Elaborate the process of designing your own modules with a clear example. (08 Marks)

OR

4 a. Describe the steps to test your code semi automatically with an example. (08 Marks)
   b. List any four methods in class str to demonstrate calling methods in the object-oriented way.
                                                                             (08 Marks)

Module-3

5 a. "Lists are Heterogeneous". Support the statement with an example.   (04 Marks)
   b. Explain the process of modifying lists by using the memory model.   (12 Marks)

OR

6 a. Consider the following list:
      li = [1, 7, 9, 12, 16]   Give the outputs of the following commands:
      (i)   li [0 : 3]   (ii) li [0 : -1]   (iii) li [:: -1]
      (iv) li [-1 : -4]   (v) li [:]   (vi) li [: 4]   (06 Marks)
   b. Explain in detail about processing lists using indices.   (10 Marks)

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Module-4

7   Discuss about the 4 techniques for reading files in detail.   (16 Marks)

OR

8   a. Demonstrate any 6 set operations with examples.   (06 Marks)
     b. Describe the process of storing and accessing data using Dictionaries.   (10 Marks)

Module-5

9   a. List out and explain the phases involved in object-oriented programming. (10 Marks)
     b. Explain the process of writing a method in Class Book.   (06 Marks)

OR

10   a. Demonstrate the process of grouping widgets with the frame type.   (08 Marks)
     b. Explain about the key elements to build larger GUIs – The Models, Views and Controllers.
         Give an example.   (08 Marks)

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