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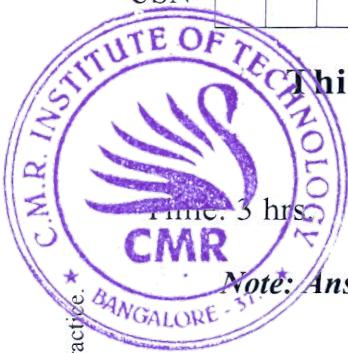
Third Semester MCA Degree Examination, Jan./Feb. 2023
Programming Using Python

Time: 3 hrs.

Max. Marks: 100

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

Module-1

1 a. How a Python program is run on a computer? Discuss with a neat diagram. **(06 Marks)**

   b. Write the output for the following:
   - (i)   56||4
   - (ii) $3 < 4$ and $4 < 5$
   - (iii) $2 > 4$
   - (iv) $2 = = 3$
   - (v) $2**3$
   - (vi) $-2*4+3*+2$ **(06 Marks)**

   c. Trace the function call in the following code by using memory model.
   ```
   >>> def f(x) :
           x = 2*x
           return (x)
   >>> x = 1
   >>> x = f(x+1) + f(x+2)
   ```
   (08 Marks)

OR

2 a. With an example, explain the following built-in functions:
   (i) abs( )   (ii) pow ( )   (iii) int ( )   (iv) round ( )   (v) help ( ) **(10 Marks)**

   b. With different examples, explain how print ( ) function can be used to print messages. **(10 Marks)**

Module-2

3 a. How Boolean operators and relational operators can be used in python? Explain with examples for both. **(10 Marks)**

   b. With the help of syntax and proper examples, explain the different forms of "if" statements available in python. **(10 Marks)**

OR

4 a. Define a module. Explain the different ways of importing modules. **(10 Marks)**

   b. Explain the below string methods with an example for each :
   - (i)   capitalize ( )
   - (ii) find (s)
   - (iii) islower ( )
   - (iv) rstrip ( )
   - (v)   upper ( ) **(10 Marks)**

Module-3

5 a. Discuss the usage of the below mentioned functions with an example for each:
   (i) len ( )
   (ii) max ( )
   (iii) min ( )
   (iv) sum ( )
   (v) sorted ( ) (10 Marks)
   b. With proper examples, explain the working of for and while loop in python. (10 Marks)

OR

6 a. How break and continue statements are used in Python? Explain with an example for each. (10 Marks)
   b. Explain any 5 methods of list with an example. (10 Marks)

Module-4

7 a. Which are the different techniques for reading a file in python? Explain. (12 Marks)
   b. With an example, explain any 4 set methods. (08 Marks)

OR

8 a. Compare the storage collection types tuples and dictionary. (10 Marks)
   b. What is inverting a dictionary? Explain with example. (10 Marks)

Module-5

9 a. What are the different phases that are involved in object orient programming? Explain. (10 Marks)
   b. Discuss the procedure of creating a method in a class with example. (10 Marks)

OR

10 a. Explain the model view controller design with the help of tkinter program. (10 Marks)
    b. Explain any 05 Graphical User Interface Widgets with respect to tkinter. (10 Marks)

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