H   Roll No. ....

TCS–303

B. TECH. (CSE) (THIRD SEMESTER) MID SEMESTER EXAMINATION, 2019
PYTHON PROGRAMMING
Time : 1 : 30 Hours
Maximum Marks : 50

Note : (i) This question paper contains two Sections.

(ii) Both Sections are compulsory.

Section—A

1. Fill in the blanks/True-False :   (1×5=5 Marks)

(a) When we write the code str = 'hello' followed by str [: 2] at python shell prompt, it will print the _____ output.

(b) _____ keyword is used to define methods in Python ?

(c) The _____ is a built-in data types in Python used to represent one-to-one relationship between keys and values.

(d) List is Mutable and Tuple is immutable.

(True/False)

(e) The arrange( ) function can be used for creating 2D array.   (True/False)

2. Attempt any *five* parts :   (3×5=15 Marks)

Write short notes on the following :

(a) Python Virtual Machine.

(b) Frozen Binaries.

(c) Any *three* comparisons between 'C' and Python.

(d) Calculate sum of two numbers using command line arguments.

(e) How Python is Architecture neutral and platform independent ?

(f) Membership operator.

Section—B

3. Attempt any *two* parts of choice from (a), (b) and (c).   (5×2=10 Marks)

(a) List and explain the features of Python.

(b) We know that Python used garbage collector to deallocate memory automatically. Explain the strategies used by garbage collector to deallocate memory in brief.

(c) Explain 'break', 'continue' and 'pass' keywords with example.

4. Attempt any *two* parts of choice from (a), (b) and (c).   (5×2=10 Marks)

(a) Write a Python program to create function named binary_search (list, item) to search an item in a sorted list.

(b) What are the different ways to create 2D arrays in Python ? Explain with suitable examples.

(c) Create a Python program to perform survey on four different model of Maruti (Maruti-K10, Zen-Astelo, Wagnor, Maruti- SX4) owned by person living in four metro cities (Delhi, Mumbai, Chennai and Kolkata). Display tabulated report like format given below :

	Maruti-K10	Baleno	Ertiga	Swift
Delhi				
Mumbai				
Chennai				
Kolkata				

Calculate numbers of cars of different model in each metro city.

5. Attempt any *two* parts of choice from (a), (b) and (c).   (5×2=10 Marks)

(a) Consider the following string :

S = "Graphic Era Hill University"

What will be the output of the following code snippet ?

(i) print(s[-3:-1:1])

(ii) print(s[-3:-1:-1])

(iii) print(s[-3::1])

(iv) print(s[::-1])

(v) print(s[::])

(b) Write a Python program to add 'ing' at the end of a given string (length should be at least 3). If the given string already ends with 'ing', then add 'ly' instead. If the string length of the given string is less than 3, leave it unchanged :

Sample String : 'abc'

Expected Result 'abcing'

Sample String : 'string'

Expected Result : 'stringly'

(c) Write a Python program to create a lambda function that returns a square value of given number.

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