GUJARAT TECHNOLOGICAL UNIVERSITY
BE - SEMESTER–VIII (NEW) - EXAMINATION – SUMMER 2018

Subject Code: 2180711   **Date: 07/05/2018**

Subject Name: Python Programming(Departmental Elective - III)

Time: 10:30 AM to 01:00 PM   **Total Marks: 70**

Instructions:
1. Attempt all questions.
2. Make suitable assumptions wherever necessary.
3. Figures to the right indicate full marks.

Q.1	**(a)**	Give syntax of the methods which can be used to take input from the user in python program.	**03**
	(b)	Give the syntax and significance of string functions: title() and strip().	**04**
	(c)	Write a Python program which will throw exception if the value entered by user is less than zero.	**07**
Q.2	**(a)**	How to comment specific line(s) in Python program?	**03**
	(b)	How append() and extend() are different with reference to list in Python?	**04**
	(c)	Write a Python program to find reverse of given number using user defined function.	**07**

OR

	(c)	Write a Python program to search a specific value from a given list of values using binary search method.	**07**
Q.3	**(a)**	What is the difference between $==$ and *is* operator in Python?	**03**
	(b)	Give the output of following Python code: myStr = 'GTU is the best University' print myStr [15 : : 1] print myStr [-10 : -1 : 2]	**04**
	(c)	Write a Python program which will return the sum of the numbers in the array, returning 0 for an empty array. Except the number 13 is very unlucky, so it does not count and number that come immediately after 13 also do not count. Example : [1, 2, 3, 4] = 10 [1, 2, 3, 4, 13] = 10 [13, 1, 2, 3, 13] = 5	**07**

OR

Q.3	**(a)**	Briefly describe the methods of regular expression.	**03**
	(b)	Give the output of following Python code: t = (1, 2, 3, (4,), [5, 6]) print t[3] t[4][0] = 7 print t	**04**
	(c)	Write a Python program which takes a list and returns a list with the elements "shifted left by one position" so [1, 2, 3] yields [2, 3, 1]. Example: [1, 2, 3] → [2, 3, 1] [11, 12, 13] → [12, 13, 11]	**07**
Q.4	**(a)**	Explain sort() with an example.	**03**
	(b)	How operator overloading can be implemented in Python? Give an example.	**04**
	(c)	Create a Python program to read a text file and do following: 1. Print no. of lines 2. Print no. of unique words 3. Store each word with its occurrence in dictionary	**07**

OR

Q.4	**(a)**	How sorted() can be used with list in Python? Give an example.	**03**
	(b)	Differentiate between filter and map in Python using example.	**04**
	(c)	Write a Python program to implement the concept of echo server.	**07**
Q.5	**(a)**	Explain *in* operator in Python with an example.	**03**
	(b)	Write a Python program to read a text file and do following:	**04**

1. Print no. of words
2. Print no. statements

	(c)	Write a Python program to create class GTU with attributes like class variable cnt, instance variables x and y, instance methods get_value and print_value.	**07**

OR

Q.5	**(a)**	Write a python program to implement any one classical cipher.	**03**
	(b)	Explain steps to create widgets. Write Python program to display a label on clicking a push button.	**04**
	(c)	Write Python GUI program to create three push buttons using Tkinter. Background color of a frame should be changed when different buttons are clicked.	**07**

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