

GUJARAT TECHNOLOGICAL UNIVERSITY**BE - SEMESTER– VIII (New) EXAMINATION – WINTER 2019****Subject Code: 2180711****Date: 29/11/2019****Subject Name: Python Programming****Time: 02:30 PM TO 05:00 PM****Total Marks: 70****Instructions:**

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

| | | MARKS |
|------------|--|--------------|
| Q.1 | (a) Explain Difference between formal and actual parameter with example. | 03 |
| | (b) What is Interpreter? Explain How python interpreter works. | 04 |
| | (c) What are the differences between python and C language? | 07 |
| Q.2 | (a) Explain raw_input() function with example. | 03 |
| | (b) Write a python program to implement Fibonacci sequence for given input. | 04 |
| | (c) Write a python program to implement isPalindrome() function to check given string is palindrome or no. | 07 |
| | OR | |
| | (c) Write a python program to implement Student class which has method to calculate CGPA. Assume suitable class variables. | 07 |
| Q.3 | (a) Explain different types of comments in python. | 03 |
| | (b) Explain Indexing and Slicing operation for string manipulation with example in python. | 04 |
| | (c) Explain Lists along with methods associated with lists and explain mutability with respect to Lists. | 07 |
| | OR | |
| Q.3 | (a) Explain lambda function along with map and filter functions. | 03 |
| | (b) Write a python program to read line by line from a given files file1 & file2 and write into file3. | 04 |
| | (c) Explain Tuples, Lists and Dictionaries with example and give comment on mutability for each of them. | 07 |
| Q.4 | (a) Give difference between black-box and glass-box testing. | 03 |
| | (b) Explain usage of try-except and assert keywords. | 04 |
| | (c) Write a python program to implement linear search and binary search. | 07 |
| | OR | |
| Q.4 | (a) Explain basic idea behind hash table with suitable example. | 03 |
| | (b) Write a python program to implement multiple inheritance. | 04 |
| | (c) Write a python program to implement merge sort. | 07 |
| Q.5 | (a) Explain regular expression methods match and search with its parameters. | 03 |
| | (b) Write a python program to create a plotting of years of compounding v/s value of principal using pyplot library. Assume reasonable values for principal, interest rate and years | 04 |
| | (c) Explain Caesar cipher and Write a python program to implement Caesar cipher. | 07 |

- Q.5**
- (a) What is socket? How to create a socket in python? **03**
 - (b) How to implement threads in python? Explain any one method using suitable example. **04**
 - (c) Write a python GUI program to implement calculator using Tkinter library. **07**

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