Seat No.: _____ Enrolment No._____

GUJARAT TECHNOLOGICAL UNIVERSITY
MCA– SEMESTER –III EXAMINATION –SUMMER-2019

Subject Code:3630006   **Date:** 29-05-2019
Subject Name: Programming with Python
Time:02.30 pm to 5.00 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)** Short Question. Explain in one or two sentence.(any seven)   **07**

1) What IDLE stands for ?
2) What is Mutable Object ?
3) Difference between input() and raw_input() ?
4) What do you mean by Specifications ?
5) What is Regression Testing ?
6) What is Debugging ?
7) What is Matplotlib ?
8) From Linear and Binary Search, which searching technique needs sorted values in order to search ?
9) What is the name of class constructor method in Python ?
10) Which is the prompt of Python IDLE i.e. Python Prompt ?

(b) State True or False. Give Justification for FALSE statement.   **07**

1) In Tuple, we can change the values once entered.
2) In Python, "nonlocal" and "global" are used for the same concept.
3) In Python, if we don't give key in dictionary, it can work.
4) While doing exception handling, "else" is the block which executes in all the situations whether exception occurs or not.
5) Suppose we have a module named "hello". There is only one way of importing the module i.e. "import hello".
6) Merge Sort works on Divide and Conquer concept.
7) If x = "Gujarat Technological University", then print(x[:7]) will return "Technological University".

Q.2 **(a)** Explain Dictionary object in python with its various methods.   **07**
(b) Explain the use of "local", "global" and "nonlocal" variables.   **07**
OR
(b) What do you mean by Slicing ? Explain the concept of string slicing with example.   **07**

Q.3 **(a)** Explain various blocks of exception handling with example.   **07**
(b) You have to manage list of several students. But there may be possibility of some changes in the list you maintain. Which would be your choice from List or Tuple ? Explain related methods.   **07**
OR
Q.3 **(a)** What do you mean by Assertion ? Explain with example.   **07**

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	(b)	You have a module named "hello" which contains several methods. Explain various ways of importing "hello" module and justify advantage and disadvantage of importing modules in different ways.	**07**
Q.4	**(a)**	What is Class Variable and Instance Variable ? Explain both and give one small example.	**07**
	(b)	Differentiate between - Overt Bug and Covert Bug - Persistent Bug and Intermittent Bug	**07**

OR

Q.4	**(a)**	What do you mean by HashTable ? Explain in detail with example or by writing program.	**07**
	(b)	Differentiate between White Box Testing and Black Box Testing	**07**
Q.5	**(a)**	What is KnapSack Algorithm ? Explain with example.	**07**
	(b)	Write a Python Program to read a file following details. - Show contents of file by converting the contents of file in UPPER CASE. - At the end show how many lines are there in that file. - At the end show how many vowels are there in that file. - At the end show how many words are there in that file.	**07**

OR

Q.5	**(a)**	What do you mean by Dynamic Programming ? Explain with one example.	**07**
	(b)	Write a python program to create a class with following requirement. - Class must have one class variable to count no. of instance occurrence. - Class must have 2 instance variables called "n1" and "n2" which must be initialized through constructor. - Class must have an instance method called "display" to display the values of "n1" and "n2"	**07**

Class must have a class method called "display_count" to display no. of instances created till now.

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