

Seat No.: _____

Enrolment No. _____

GUJARAT TECHNOLOGICAL UNIVERSITY

MCA - SEMESTER-III EXAMINATION – WINTER 2018

Subject Code: 4639304

Date: 09-01-2019

Subject Name: Programming in Python

Time: 10.30 am to 1.00 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)** Explain the following with appropriate examples: **07**
1. Relational operators
2. Iterative construct in python.
- (b)** Answer the following: **07**
1. What is comment in python programming?
2. What is use of 'del' statement?
3. Explain 'pass' statement in python.
4. List any two dictionary methods
5. Explain the ** operator.
6. Can a function in python return multiple values?
7. Explain the 'input' function.
- Q.2 (a)** Give a comparison between List, Tuple and Dictionaries in Python. **07**
(b) How are files handled in Python? List at least four types of files that python can handle. Explain any five modes in which files can be operated with proper syntax. **07**
- OR**
- (b)** Briefly explain file handling in Python? Give the purpose and syntax of the following: **07**
open(), close(), read() and write()
- Q.3 (a)** What do you mean by Assertions? Support your answer with code. **07**
(b) What is lambda function in python? Support your answer with appropriate code. **07**
- OR**
- Q.3 (a)** What are Exceptions? Write a python code to explain exception handling. **07**
(b) Explain Formal and Actual arguments in Python. Also explain the following type of arguments with proper code. **07**
a) Positional Arguments
b) Keyword Arguments
c) Default Arguments
d) Variable Length Arguments
- Q.4 (a)** What is the use of Matplotlib in Python? Explain use of plot(), show() and title() functions of Matplotlib. **07**
(b) How is a 'class' defined in python? What is a class variable? Discuss constructor and data hiding from python view point. **07**
- OR**
- Q.4 (a)** Explain show(), figure(), plot(), savefig(), xlabel(), ylabel() with suitable example. **07**
(b) What do you mean by polymorphism? Explain overloading and overriding from python view point. Write an appropriate code to support your answer. **07**
- Q.5 (a)** Explain the concept of threading in Python. Also explain the concept of single thread for single-task and multiple threads for multi-tasks. **07**
(b) Give the details regarding data base connectivity of MySQL with Python. What methods are used to select, delete and update records from a table in a database? **07**

Take a sample table 'Subject' from the database Institute, with the columns as: SubjectCode, SubjectName and Semester. Write the code to setup the database connectivity. Also write code to perform select all records and delete all the records from the table.

OR

- Q.5 (a)** What are regular expressions in Python? How to find out that an email id entered by a user is valid or not using the python 're' module. **07**
- (b)** What is a socket? Give the details of various socket methods with appropriate syntax and explanation. **07**
