

GUJARAT TECHNOLOGICAL UNIVERSITY
MCA - SEMESTER- III• EXAMINATION – WINTER - 2016

Subject Code: 3630006**Date: 06/01/2017****Subject Name: Programming with Python****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)** Do as directed. **07**
1. Find out the output of : `print("500\n1000\nNotes".splitlines())`
 2. Find out the output of : `print("IoT@Python".swapcase())`
 3. _____ algorithms are based upon finding subproblems that are substantially smaller than the original problem.
 4. A _____ algorithm is a method for finding an item with specific properties within a collection of items.
 5. The sequence of instructions written by the programmer, called _____.
 6. Tuples are ordered sequences of elements. (True/False).
 7. There is nothing rare about exceptions in Python (True/False).
- (b)** Explain branching and iteration operation in python with example. **07**
- Q.2 (a)** 1. Explain Scoping for local variable in python. **03**
 2. What is Specifications? Explain docstring in python. **04**
- (b)** What do you mean by Assertions? Explain with example. **07**
- OR**
- (b)** What is Exception? Explain exception handling with example. **07**
- Q.3 (a)** 1. Explain structured types with types and details. **03**
 2. Explain functions with example. **04**
- (b)** What is Testing? Explain differences between black-box & glass-box testing. **07**
- OR**
- Q.3 (a)** Explain Modules & files in Python **07**
(b) Explain lists and mutability with list comprehension. **07**
- Q.4 (a)** 1. Use of Information hiding in python. **03**
 2. Explain Inheritance with example. **04**
- (b)** Explain Hash Tables in Python. **07**
- OR**
- Q.4 (a)** What is Abstract Data Types? Explain classes with example. **07**
(b) Explain Linear Search with example. **07**
- Q.5 (a)** 1. Define divide and conquer. **03**
 2. Optimal substructure and overlapping subproblems. **04**
- (b)** What is Mortgages? Explain various methods of Mortgages. **07**
- OR**
- Q.5 (a)** What is the use of PyLab in Python? Explain use of `plot()`, `show()` and `title()` functions of PyLab. **07**
(b) Explain dynamic programming with knapsack problem. **07**
