**KISII UNIVERSITY**

**SCHOOL OF INFORMATION SCIENCE AND TECHNOLOGY**

**Department of Computing Sciences**

**ACMP 250**

**UNIT NAME: Programming in Python**

Instructions: Answer Question **ONE** and any **TWO** Questions

**Question One**

1. Explain any two reasons why system developers prefer using python over the plethora of programming languages. (4 Marks)
2. Describe the concept of python variable and state its goal. (4 Marks)
3. Explain any five advantages of using python programming language. (5 Marks)
4. Highlight any four major application areas of python programming language. (4 Marks)
5. Students for Universities and technical institutions ought to learn python. Discuss. (5 Marks)
6. Explain how to call a method in python. (4 Marks)
7. Explain four data types supported by python. (4 Marks)

**Question Two**

1. Describe the concept of scope and lifetime of a python variable. (8 Marks)
2. With the aid of a user friendly program explain how you can write a program that prompts a user to input three numbers and determine the maximum number of the three. Be sure to use a method in your program. (12 Marks)

**Question Three**

1. Algorithms are very essential tools used in program design. Explain any five qualities of a good algorithm. (10 Marks)
2. Describe any five commands used while handling files in python. (10 Marks)

**Question Four**

1. Describe how decision tables are and flowcharts help in designing an efficient program and cite their salient features. (10 Marks)
2. Write a user friendly program in python which computes the sum and average marks for six units and outputs the results, remember to include sufficient comments. (10 Marks)

**Question Five**

1. Explain the importance of designing better databases in a python system development organization. (10 Marks)
2. Program design in software lifecycle consumes up to 35% of time among other resources. Discuss. (10 Marks)