

# Python - Questions for the Midterm

## Unit 1:

1. What is Python? Discuss the brief history of Python Programming Language.
2. List out and explain the features of Python Programming.
3. Explain the difference between the different versions of Python.
4. Write down the steps for installing Python / Python IDLE.
5. Explain simple data types, complex data types in Python. OR, List out all the data types of python programming languages.
6. Explain String and its inbuilt functions (any 10).
7. Write down a Python Program to perform different operations on String.
8. What is 'local', 'global', and 'nonlocal' variables in Python. Explain with an example.
9. Explain conditional statements and loops in Python with examples.
10. List out and discuss all the operators of Python Programming Language with example.
11. What is the difference between 'break', 'continue', and 'pass' statements. Explain with example.

## Unit 2:

1. What is a Function in Python. Explain with example.
2. Explain the following properties in the reference of Functions with example.
  1. Function as a Object.
  2. Function as an argument.
  3. Function as a variable.
  4. Function as a reference for another function.
3. What is recursion? Explain recursion function in Python with examples.
4. What is a Python Module. Explain with examples.
5. What is the difference between Python Modules and Python Packages. Explain with examples.
6. Write down the steps and examples for creating a package in Python.
7. Discuss 'math', 'datetime' modules with examples. (Using any 5 functions)
8. Explain Python anonymous functions (lambda functions) with examples.
9. Explain Python decorators with examples.
10. Explain Python generators with examples. Also discuss the difference between generator functions and normal functions.
11. What is OOP in Python. List out all principles or features of OOP in Python.
12. Explain constructor, method overloading, operator overloading, overriding with examples.
13. Discuss the difference between constructor and destructor in Python with example.
14. What is Inheritance Explain its types with examples.