BPLCK205B-Intro to Python Programming

SIMP Questions -22SCHEME

BY TIE REVIEW TEAM -SVIT and KSIT

Average time to be spent per module- 60 Mins

Practice Programs - P1-P5

1. Write a python program to add n numbers accepted from the user   2. Write a function to calculate the factorial of a number.
3. Develop a program to compute binomial coefficient (Given N and R).
4. Create a function to print out a blank tic-tac-toe board
5. Write a program in python that counts the number of occurrences of each letter in a string.
6. Develop a Python program to read and print the contents of a text file and initiate a function to find the total size of all the files in a given directory
7. Define a function which takes TWO objects representing complex numbers and returns a new complex number with an addition of two complex numbers. Define a suitable class 'Complex' to represent the complex number. Develop a program to read N (N >=2) complex numbers and to compute the addition of N complex numbers.

Module-1(Study any 6 Questions)

1. List the salient features of Python programming Language, Demonstrate with example print(), input() and len() in python
2. Explain string concatenation and string replication with one suitable examples for each
3. Explain basic functions in Python by considering str(), int() and float() as point of ref 4. What are Comparison and Boolean operators? List all the Comparison and Boolean operators in Python and explain the use of these operators with suitable examples
5. What are the different flow control statements supported in python? Explain all the flow control statements with example program,syntax and flowchart
6. Explain different ways of importing modules into application in Python with syntax and suitable programming examples
7. What is Exception Handling? How are exceptions handled in Python? Write a Python program with exception handling code to solve an error situation

8. Explain Local and Global Scope in Python programs. What are local and global variables? How can you force a variable in a function to refer to the global variable?

Module-2(Study any 5 Questions)

1. Explain the methods of List data type in Python for the following operations with suitable code snippets for each.
   (i) Adding values to a list ii) Removing values from a list
   (iii) Finding a value in a list iv) Sorting the values in a list
2. What is a list? Explain append(), insert(),index() and remove() methods with examples, also list down differences between list and tuple and how list can be converted to tuple-10M
3. What is a string? Explain any four methods associated with string and explain each of them with an example.
4. Discuss the different ways of traversing a list. Explain each with an example
5. What is a Dictionary in Python? How is it different from List data type?Discuss the following Dictionary methods in Python with examples.
   (i) get() (ii) items() (iii) keys() (iv) values()
6. Compare list and dictionary data structures with respect to python language.

Module-3(Study any 5 questions)

1. List out all the useful string methods which are supported in python. Explain with an example for each method.
2. Explain Python string handling methods with examples
3. Explain Password Locker Project.
4. What are the different steps in the project Adding Bullets to Wiki Markup. 5. Describe the difference between Python os and os.path modules. Also, discuss the following methods of os module
   a) chdir() b) rmdir() c) walk() d) listdir() e) getcwd()
6. What are the key properties of a file? Explain in detail the file reading/writing process with an example of a python program.

1. Explain all the functions of Shutil Module with programming examples

2. What are the different methods of file operations supported in the python shutil module.

3. What is meant by compressing files? Explain reading, extracting and creating ZIP files with programming examples for each

4. Explain the differences between permanent delete and safe delete with suitable Python programming examples to each.

5. Explain in detail (i)Assertions (ii)Logging (iii)Buttons in Debugging (iv)raising exceptions with code snippets wherever necessary

6. Explain how assertions can be used in traffic light simulation with Python code snippets.

7. Explain the support for Logging with logging module in Python

Module- 5(Study any 4 questions)

1. What is a class? How to define a class in python? How to initiate a class and how the class members are accessed? Explain with programming snippets

2. Define Class Diagram. Discuss the need for representing class relationships using Class Diagram with suitable examples.

3. Illustrate the concept of modifier and pure functions with Python snippets

4. Explain 'prototype and patch' with suitable example

5. Explain (i)Polymorphism (ii)Inheritance (iii)Overloading with examples 6. Explain init and __str__ method with an example Python Program