

Programming in Python (Practical-II)

MCA-II Semester –III 23-24

1. Maximum of three numbers in Python
2. Python Program for factorial of a number
3. Python Program for simple and compound interest
4. Python Program to check Armstrong Number
5. Python program to print all Prime numbers in an Interval
6. Python program to check whether a number is Prime or not
7. Python Program for n-th Fibonacci number
8. Python Program for Sum of squares of first n natural numbers
9. Python Program for cube sum of first n natural numbers
10. Python Program to find sum of array
11. Python Program to find largest element in an array
12. Python Program to find smallest element in an array
13. Write a Python program to i) interchange first and last elements in a list ii) to swap two elements in a list
14. Python program i) to find length of list ii) to check if element exists in list iii) to clear a list in Python iv) Reversing a List
15. Python program i) to find sum of elements in list ii) Multiply all numbers in the list Python program i) to find smallest and largest number in a list
16. Python program to find second largest number in a list
17. Python program to print even and odd numbers in a list
18. Python program to print all even and odd numbers in a range
19. Python program to print positive numbers and negative in a list
20. Python | Cloning or Copying a list
21. Python | Count occurrences of an element in a list
22. Python | Program to print duplicates from a list of integers
23. Python program to find Cumulative sum of a list
24. Python program to check if a string is palindrome or not
25. Reverse words in a given String in Python
26. Python program– Extract Unique values dictionary values and to find the sum of all items in a dictionary
27. Python program to remove a key from dictionary and to sort list of dictionaries by values and to sort list of dictionaries by values in Python
28. Python program Merging two Dictionaries
29. Python – Convert key-values list to flat dictionary and Append Dictionary Keys and Values (In order) in dictionary
30. Python program to Find the size of a Tuple and Maximum and Minimum K elements in Tuple
31. Create a list of tuples from given list having number and its cube in each tuple
32. Python – Adding Tuple to List and vice – versa
33. Python – Closest Pair to Kth index element in Tuple
34. Python – Convert Nested Tuple to Custom Key Dictionary
35. Python Program to print the pattern
&
&&
&&&
&&&&
36. program to demonstrate instantiating a class
37. Create a Sample class with init method

38. Program to show that the variables with a value assigned in the class declaration, are class variables and variables inside methods and constructors are instance variables.
39. program to show that we can create instance variables inside methods
40. Programs to demonstrate constructor and parameterized constructor.
41. Program to demonstrate destructor.

Theory Questions

Unit-I

1. What is List in Python? Explain the following method with syntax and example.
 - i. append()
 - ii. extend()
 - iii. pop()
 - iv. remove()
2. What is dictionary in Python?
Consider the dictionary
Dict = { "Name" : "IICC", "University" : "RTMNU", "Estt Year": 1987}
Perform the following operation on dictionary with their syntax and output.
 - i. Get the University using appropriate method and store it in a variable Univ.
 - ii. Add the item Course "MCA" in Dict
 - iii. Update the "Estt Year " to 1997 in Dict
 - iv. Add nested dictionary with key other course and values "PGDCS" and "PGDCCA"
 - v. Remove an item "Estt Year" in a Dict
 - vi. Copy the Dict to Dict1
3. What is tuple in Python? Explain the count() and index() methods with syntax and example
4. What are the applications of Python? Explain.
5. Explain if-else statement in Python with syntax and example.
6. What are the different operators in Python? Explain with example.
7. Explain for and while statements in Python with syntax and example.
8. Explain break, continue and pass in Python with suitable example.
9. Write a program in Python to check whether a string is palindrome or not.
10. What is dictionary in Python? Explain with syntax and example.
11. What is function in Python? Explain with syntax and example.
12. Explain LGB Rule with example.
13. Explain arguments are objects and argument calling by keyword in python.
14. What is default arguments? Explain.
15. Write a note on Argument tuples and argument dictionaries in python.
16. List function rules about defining, calling.
17. Explain apply and map statements.
18. Explain anonymous function in python.

Unit-II

19. What is Module in Python? How to create a module?
20. Explain packages in Python.
21. Explain class and objects in Python with example.
22. Write a note on Object Constructors and Object Destructors.
23. Explain class inheritance in python with example.
24. Explain __init__() method with an example.
25. Write a Python program for instantiating a class.
26. What is destructor? Write a program to demonstrate destructor.

27. What is an exception? What happens when an exception occurs?
28. What is exception handling? Explain try...except...else.
29. Write a note on try...finally statement.
30. Explain raise and assert statement with syntax.