PYTHON PROGRAMMING
Important questions

UNIT-I

1. Write a Python program to demonstrate explicit type conversion.
2. Demonstrate the use of break and continue keywords in looping structure using a code snippet.
3. List out and explain the key features of Python programming.
4. What is a Conditional statement in Python programming? Give the syntax of various Conditional structures available in Python programming.
5. How to access the characters in Python String? Write a Python program to demonstrate it.
6. Write a Python program to demonstrate the usage of Logical, Membership and Identity operators
7. List out various operators available in Python and explain their precedence and associativity
8. Write a python program to calculate the total amount to be paid by user after reducing the 10% discount on purchases more than 1000 rupees.
9. Explain the syntax of different Nested Decision structures in Python programming.
10. Describe the features of Python that made it so popular.
11. Write a Python program to demonstrate the usage of all specifiers available with format() method.
12. Write a Python program to find those numbers which are divisible by 5 and multiples of 3, between 1 and 1000.
13. Explain the Python built-in functions to perform data type conversions.
14. Explain the execution behavior of various Decision making statements available in Python programming with neat flow diagrams.

UNIT-II

1. Write a program to compute only even numbers sum within the given natural number using a continue statement.
2. Is String a mutable data type? Also explain the string operations length and slicing in detail with an appropriate example
3. Compare and contrast for loop and while loop.
4. Write a Python program to check whether a given number is Armstrong number or not.
5. Write the syntax of various Loop statements supported by Python programming and explain their execution behavior with neat flow diagrams.
6. How to Encrypt and Decrypt Strings in Python? Explain with an example.
7. Write a Python program to demonstrate the usage of common Python String methods.
8. Develop a Python program to display the Fibonacci series between 0 and 100. Hint : The Fibonacci Sequence is the series of numbers 0, 1, 1, 2, 3, 5, 8, 13, …

9. Write a Python program that prints all the numbers from 0 to 100 except the multiples of 4 and 6.
10. Compare and Contrast Pre-test and Post-test loop structures in Python programming
11. Write a Python program to construct the following pattern, using a nested for loop.

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12. What is meant by Data Encryption? What are its types? What are the libraries available in Python for Data Encryption?
13. How to write a String to a text file in Python? Explain with a sample program.
14. Write a Python program to get substring between characters in the input.
15. Write a Python program to compute the natural logarithm of 2, by adding up to n terms in the series 1 – ½+ 1/3 – ¼ + 1/5 -… 1/n where n is a positive integer and input by user.
16. Develop a Python program to search the string 'laptop' in "sales.txt" file and print its line along with the line number.

UNIT-III

1. Does mutability support for list, if yes explain any two methods with example?
2. Write a program to read one subject mark and print pass or fail Use single return values function with argument.
3. Write a brief note on PIP. Explain installing packages via PIP
4. Write a Python program to read a word and print the number of letters, vowels and percentage of vowels in the word using a dictionary.
5. List out various Python List Built-in methods and write a program to demonstrate their usage.
6. Develop a Python program to access the elements of a Nested dictionary
7. What are Python modules? Explain the steps to import specific attributes from a module into the current Namespace with appropriate code snippets.
8. Discuss various ways to access the elements of a List in Python with appropriate code snippets.
9. What is a Lambda function in Python? What are the benefits of Lambda function in Python? Demonstrate its usage through a sample program.
10. Explain the steps to create a Dictionary in Python and list out Dictionary Built-in functions.

11. Write about the following features in Python programming i)Modules ii) globals() and locals() Functions iii)Packages
12. Explain about Negative indexing and List Slicing in Python with a sample program.
13. Write a Python function to check whether a number is perfect or not.
14. Write a Python program to extract characters from various text files and puts them into a List.
15. Discuss various ways to create Lists in Python and Write a program to illustrate Negative index List slicing.
16. What is an Anonymous function and when should you use it? How Anonymous function is different from normal function?
17. Write the properties of Dictionary Keys in Python. And explain how to access, delete and update Dictionary elements.

UNIT-IV

1. Create a class Employee with data members name, department and salary. Create suitable methods for reading and printing employee information.
2. How to implement method overriding in Python? Explain
3. Write a Python program that reads a text file and changes the file by capitalizing each character of file.
4. Illustrate the concept of pure function with Python code.
5. Explain the prototypes of read(), readline() and readlines() functions in Python.
6. Write about Class Inheritance and demonstrate the usage of issubclass() and isinstance() methods in Python.
7. How do you manipulate a file pointer in Python? Explain with a sample program.
8. Explain the steps to read config files and write Log files in Python.
9. What are the different modes of opening a file in Python? Explain the Python 'open()' built-in function.
10. Explain about write() and writelines() functions in Python.
11. Write Python code snippets to illustrate Method overriding and Method overloading concepts.
12. Explain the prototype of seek () function in Python and write a program to demonstrate its usage.
13. Describe the steps to create Classes and Objects in Python. List out the Built-in Class attributes.
14. Write a Python program to create a class 'student' with members {name, branch, grade}. Define appropriate member functions for reading and displaying the student information.
15. How can polymorphism be implemented in Python? Illustrate with a code snippet.

UNIT-V

1. What is the difference between else block and finally block in exception handling? Explain with an example program.
2. Illustrate the use of the four main elements of scratch- Programming palette, storage area, Sprites and Script.
3. How to create, raise and handle user defined exceptions in Python? Illustrate with a Python program.
4. Give the syntax to create Radiobutton widget. And write a Python program to create Radiobuttons for selecting the Gender(Male, Female, Transgender) on the same canvas.
5. Write a Python program to handle Division By Zero exception.
6. Write a Python GUI program to create three single line text-box to accept a value from the user using tkinter module
7. Write a python program to illustrate the cases where a try block throws multiple exceptions.
8. Write a Python GUI program to create Listbox bar widgets using tkinter module.
9. How to create Option Menu using tkinter in Python? Illustrate with a program.
10. List and explain any 12 Built-in Exceptions available in Python. Explain the usage of 'except' clause in Python with multiple exceptions and no exceptions.
11. Explain the syntax and parameters of the following Widgets using tkinter in Python with appropriate code snippets. i)Scrollable List Box ii)Menu iii)Progress bar