

## **UNIT-I**

### **Short Answer Questions**

1. Differentiate between compiled and interpreted languages?
2. List some of the keywords in python
3. Write the syntax for nested for loops and nested while loop statements.
4. List python standard/built-in data types
5. What is interactive mode in python
6. What is floor division or truncating division? Give example.
7. What happens if a semicolon (;) is placed at the end of a Python statement?
8. Describe type( ) method with example.
9. Define if...else statements in python.
10. What are membership operators? Give examples for usage
11. List the differences between python2 and python3?
12. Write the syntax of 'print()' function. Describing its arguments.

### **Long Answer Questions**

1. How do you run a python script in various modes. Explain with a python program.
2. Explain in detail about python type conversion and type casting with example.
3. Explain about the need for learning python programming and its importance.
4. List and explain different arithmetic operators supported by Python. Discuss about their precedence and
5. associativity with an example.
6. Explain how Python is different from C/C++/Java
7. Write about input/output statements in python with suitable examples.
8. Write a python program to convert given decimal number into binary, octal and hexadecimal
9. What is an Identifier? Mention the rules to define an identifier.
10. Write about membership & identity operators in python with suitable examples.
11. Who uses python today? What are Python's technical strengths?
12. Write the history of Python.
13. Discuss about Python operators precedence with an example.
14. Write a Python program that prints all the numbers from 0 to 50 except multiples of 10.
  - a. Write a python program to convert given decimal number into binary, octal and hexadecimal
  - b. What is an Identifier? Mention the rules to define an identifier.
15. Write about membership & identity operators in python with suitable examples.

## **UNIT-II**

### **Short Answer Questions**

1. Why \* is called string repetition operator?
2. What is the purpose of global keyword in Python?

3. Differentiate between append() and extend() methods?
4. Write a python program to print the following pattern
 

```

1
2 3
4 5 6
7 8 9 10
      
```
5. Distinguish between parameter and argument
6. List the properties of dictionary in python.
7. Differentiate between dictionary and list?
8. Define lambda function? Write syntax for lambda function.
9. Write a python program to print the following pattern
 

```

1
2 3
4 5 6
7 8 9 10
      
```
10. What is floor division or truncating division? Give example.
11. List the properties of dictionary in python.
12. Distinguish between parameter and argument

### **Long Answer Questions**

1. What is lambda function? What are the characteristics of a lambda function? Give an example.
2. Describe the process of storing and accessing data using dictionaries.
3. Write Python code to solve the quadratic equation  $ax^2 + bx + c = 0$  by accepting input for coefficients from the standard input.
4. Write a Python program to find numbers between 100 and 400 (both included) where each digit of a number is an even number. The numbers obtained should be printed in a comma-separated sequence.
5. Consider the list `std=[5,4,7,3,6,2]` and write the python code to perform the following operations
  - i. Insert an element 9 at the beginning of the list
  - ii. Insert an element 8 at the end of list
  - iii. Insert an element 8 at the index position 3 of list
  - iv. Delete an element at the beginning of the list
  - v. Delete an element at the end of the list
  - vi. Delete an element at the index position 3
  - vii. Print the list in reverse order(end to start)
  - viii. Delete all the elements of the list
6. Explain about control transfer statements in python with suitable examples
7. Write a Python program to check the validity of password input by users.  
Validation :
  - At least 1 letter between [a-z] and 1 letter between [A-Z].
  - At least 1 number between [0-9].
  - At least 1 character from [\$#@].
  - Minimum length 6 characters.

Maximum length 16 characters.

8. List the string testing methods with examples
9. Discuss about scope of the variables in python functions.
10. Write a python function to create and print a list where the values are square of numbers between 1 and 30 (both included)
11. Explain about anonymous functions and fruitful functions in python with example programs.
12. Python variables do not have specific types. Justify this statement with the help of an example
13. What are 4 built-in numeric data types in Python? Explain
14. Mention the differences between set and frozen set.
15. Describe Python control statements with appropriate examples.
16. Write a python program to print the following pattern using looping statements  
1  
121  
12321  
1234321  
123454321
17. Discuss various types of arguments in Python? Justify your answer with sample programs.
18. Write a Python program that interchanges the first and last characters of a given string.
19. Write a python program to display characters of a given string in reverse order using for loop?
20. Discuss about Default and variable length arguments each with two example programs.
21. Write a Python Program to find out common elements in given lists.
22. Write a python program to find all the positions of occurrence of substring in a given string.
23. Define lambda function. Explain the use of lambda function with filter (), map (), reduce () functions.

## **UNIT-III**

### **Short Answer Questions**

1. What is an error? Write different types of errors in python.
2. How to handle multiple exceptions with single except clause.
3. Write about data hiding in python with example program
4. Write a python class which has two methods get\_String and print\_String. get\_String accepts a string from the user and print\_String print the string in uppercase.
5. How to create a class in python?
6. Write any two differences between Errors and Exceptions.
7. Write a python class which has two methods get\_String and print\_String. get\_String accepts a string from the user and print\_String print the string in uppercase.
8. Write about data hiding in python with example program

### **Long Answer Questions**

1. List and explain the different phases involved in object-oriented programming language.
2. Write a Python program to demonstrate Multiple Inheritance.
3. Observe the following code and justify the below statements

```

try:
    stmt-1
    stmt-2
    stmt-3
except XXX:
    stmt-4
    stmt-5

```

- i. What happens "If there is no exception".
  - ii. What happens "If an exception raised at stmt-2 and corresponding except block matched".
  - iii. What happens "If an exception raised at stmt-2 and corresponding except block not matched".
  - iv. What happens "If an exception raised at stmt-4".
- What happens "If an exception raised at stmt-5".

4. How to declare a constructor method in Python? Explain with an example.
5. Explain the features of Inheritance in python with appropriate examples.
6. List and explain different Object Oriented features supported by Python
7. Write a python program to handle the ZeroDivisionError Exception.
8. Explain the concept of Exception Handling in Python with suitable program
9. Write a Python class named Rectangle constructed by length and width and a method which will compute the area of a rectangle.

## **UNIT-IV**

### **Short Answer Questions**

1. What are the attributes of file objects.
2. Write any two Differences between numpy and scipy?
3. Define package. How to import a package in python program.
4. Solve the following linear equations using scipy library module

$$X+3y+5z=10$$

$$2x+5y+z=8$$

$$2x+3y+8z=3$$

5. List the file opening Modes.
6. Mention the usage of modules in Python Programming.

### **Long Answer Questions**

1. Elaborate the process of designing your own modules with a appropriate example.
2. Write Program to print the number of lines, words and characters present in the given file.
3. Write a Python program which iterates the integers from 1 to 50. For multiples of three print "Fizz" instead of the number and for the multiples of five print "Buzz". For numbers which are multiples of both three and five print "FizzBuzz".
4. Write a python program to append data to an existing file and then displaying the entire file.

5. Explain importance of 'matplotlib' and its usage.
6. Write a python program to find the determinant for a 2\*2 matrix using scipy library module
7. Discuss the different modes for opening a file and closing a file
8. How to handle exception in python explain in detail with suitable examples
9. Write a python program using classes and objects to simulate result preparation system for 20 students. The data available for each student includes: Name, Rollno. and Marks in 3 subjects and also calculate percentage and grades for each student.
10. How will you create a Package & import it? Explain it with an example program.
11. Write a python program to find the mean and variance for the following data using scipy.  
[ 2,23,45,56,78,89,13,33,66,89]

## **UNIT-V**

### **Short Answer Questions**

1. What is tkinter TK()
2. What is the need of TKinter module in Python?
3. What is tkinter used for in Python?
4. What is Python Tkinter pack() method?
5. What is Python Tkinter grid() method?
6. How to stop copy, paste, and backspace in text widget in tkinter?

### **Long Answer Questions**

1. Explain DB-API based python database programming with example
2. Explain in detail about TKinter with python programming?
3. Explain in detail about Object Relational Managers?
4. Develop a Python program to manage your class database. (Name, DOB, Reg.No, Addr,Phone No, Mark)
5. How to get a new API response in a Tkinter textbox?
6. How to get an Entry box within a MessageBox in Tkinter?
7. How to get the current date to display in a tkinter window?
8. How to reconfigure Tkinter canvas items?
9. How to create a Tkinter error message box?