Python

1. B

2. C

3. A

4. A

5. C

6. C

7. B

8. A,B,C

9. B,D

10. C

11.

Lists: are just like dynamic sized arrays, declared in other languages (vector in C++ and ArrayList in Java). Lists need not be homogeneous always which makes it a most powerful tool in Python.

Tuple: A Tuple is a collection of Python objects separated by commas. In someways a tuple is similar to a list in terms of indexing, nested objects and repetition but a tuple is immutable unlike lists that are mutable.

Set: A Set is an unordered collection data type that is iterable, mutable and has no duplicate elements. Python’s set class represents the mathematical notion of a set.

Dictionary: in Python is an unordered collection of data values, used to store data values like a map, which unlike other Data Types that hold only single value as an element, Dictionary holds key:value pair. Key value is provided in the dictionary to make it more optimized.

12.

Strings are immutable so we can't change its value. But the contents of the list can change. The tuple itself isn't mutable but contain items that are mutable.

print("I"," ","Love"," ","Python")

13.

The ord() method in Python converts a character into its Unicode code value. This method accepts a single character. You will receive the numerical Unicode value of the character as a response. The ord() method is useful if you want to check whether a string contains special characters.

Def type\_variable(x)

result=type(x)

print(result)

14.

import cmath

a = int(input())

b = int(input())

c = int(input())

# calculate the discriminant

d = (b\*\*2) - (4\*a\*c)

# find two solutions

sol1 = (-b-cmath.sqrt(d))/(2\*a)

sol2 = (-b+cmath.sqrt(d))/(2\*a)

print('The solution are {0} and {1}'.format(sol1,sol2))

15.

num = int(input("Enter the value of n: "))

hold = num

sum = 0

if num <= 0:

print("Enter a whole positive number!")

else:

while num > 0:

sum = sum + num

num = num - 1;

# displaying output

print("Sum of first", hold, "natural numbers is: ", sum)