**Experiment 2**

**Implement Basic concept**

1. **All Sequences(String, List, Tuple, Set, Dictionary)**
2. **Operations on sequences.**

**Solve following Questions**

**Q-1. What will be the output of the following code snippet?**

a=[1,2,3,4,5,6,7,8,9]

print(a[::2])

#### Q-2. What will be the output of the following code snippet?

a=[1,2,3,4,5,6,7,8,9]

a[::2]=10,20,30,40,50,60

print(a)

#### Q-3. What will be the output of the following code snippet?

a=[1,2,3,4,5]

print(a[3:0:-1])

#### Q.4. What is the correct command to shuffle the following list?

fruit=['apple', 'banana', 'papaya', 'cherry']

#### Q.5 What will be the output of the following code snippet?

init\_tuple = ()

print (init\_tuple.\_\_len\_\_())

**A.** None  
**B.**  1  
**C.** 0  
**D.** Exception

#### Q.6 What will be the output of the following code snippet?

init\_tuple\_a = 'a', 'b'

init\_tuple\_b = ('a', 'b')

print (init\_tuple\_a == init\_tuple\_b)

1. 0  
   **B.**  1  
   **C.** False  
   **D.** True

#### Q.7 What Will Be The Output Of The Following Code Snippet?

init\_tuple = [(0, 1), (1, 2), (2, 3)]

result = sum(n for \_, n in init\_tuple)

print(result)

**A.** 3  
**B.** 6  
**C.** 9  
**D.** Nothing gets printed.

#### Q.8 What Will Be The Output Of The Following Code Snippet?

init\_tuple = (1,) \* 3

init\_tuple[0] = 2

print(init\_tuple)

1. (1, 1, 1)  
   **B.** (2, 2, 2)  
   **C.** (2, 1, 1)  
   **D.** TypeError: ‘tuple’ object does not support item assignment

#### Q.9 What Will Be The Output Of The Following Code Snippet?

a = {'a':1,'b':2,'c':3}

print (a['a','b'])

1. Key Error  
   **B.** [1,2]  
   **C.** {‘a’:1,’b’:2}  
   **D.** (1,2)

#### Q.10 What Will Be The Output Of The Following Code Snippet?

rec = {"Name" : "Python", "Age":"20"}

r = rec.copy()

print(id(r) == id(rec))

1. True  
   **B.** False  
   **C.** 0  
   **D.** 1

**Q.10 What will be the output of the following code snippet?**

init\_tuple\_a = '1', '2'

init\_tuple\_b = ('3', '4')

print (init\_tuple\_a + init\_tuple\_b)

**A.** (1, 2, 3, 4)  
**B.**  (‘1’, ‘2’, ‘3’, ‘4’)  
**C.** [‘1’, ‘2’, ‘3’, ‘4’]  
**D.** None

#### Q.11. Which of the following statements given below is/are true?

**A.** Tuples have structure, lists have an order.  
**B.** Tuples are homogeneous, lists are heterogeneous.  
**C.** Tuples are immutable, lists are mutable.  
**D.** All of them.

**Que. 12 Implement following programs in Python.**

1. **Implement Stack using Arrays in Python.**
2. **Implement program to print all Prime numbers in given Interval.**
3. **Implement program to check Armstrong Number.**
4. **Implement program to find factorial of given number using Recursion.**
5. **Implement program to find largest element in an array.**
6. **Implement program to reverse content of given List.**
7. **Implement program to insert element in List such that all elements are sorted.**
8. **Implement program to check if a string is palindrome or not.**
9. **Implement program to remove all duplicates alphabets from a given string.**
10. **Implement following program using Dictionary in Python :**

**Maintain student information system in the form of <RollNumber, Name>. You should be able to perform following functions on the information :**

**Insert new student, Delete existing student, Modify Name of existing student, Display (entire list / particular student)**

1. **Implement program to remove duplicate tuples from given list of tuples.**
2. **Create a list of tuples from given list having number and its cube in each tuple.**