

### *1. Differentiate between list, tuples and dictionary.*

*List and Tuple objects are sequences. A dictionary is a hash table of key-value pairs. List and tuple is an ordered collection of items. Dictionary is unordered collection.*

*List and dictionary objects are mutable i.e. it is possible to add new item or delete an item from it. Tuple is an immutable object. Addition or deletion operations are not possible on tuple object.*

*of them is a collection of comma-separated items. List items are enclosed in square brackets [], tuple items in round brackets or parentheses (), and dictionary items in curly brackets {}*

```
>>> L1=[12, "Ravi", "B.Com FY", 78.50] #list
```

```
>>> T1=(12, "Ravi", "B.Com FY", 78.50)#tuple
```

```
>>> D1={"Rollno":12, "class":"B.com FY", "percentage":78.50}#dictionary
```

*List and tuple items are indexed. Slice operator allows item of certain index to be accessed*

```
>>> print (L1[2])
```

*B.Com FY*

```
>>> print (T1[2])
```

*B.Com FY*

*Items in dictionary are not indexed. Value associated with a certain key is obtained by putting in square bracket. The get() method of dictionary also returns associated value.*

### *2. Write a Python program to iterate over dictionaries using for loops*

```
d = {'Red': 1, 'Green': 2, 'Blue': 3}
```

```
for color_key, value in d.items():
```

```
    print(color_key, 'corresponds to ', d[color_key])
```

*Output:*

*Red corresponds to 1*

*Blue corresponds to 3*

*Green corresponds to 2*

### *3. Write a Python program to sum all the items in a dictionary.*

```
my_dict = {'data1':100,'data2':-54,'data3':247}
```

```
print(sum(my_dict.values()))
```

*Output: 293*

*4. Write a Python script to concatenate following dictionaries to create a new one.  
Sample Dictionary:*

*a. dic1= {1:10, 2:20}*

*b. dic2= {3:30, 4:40}*

*c. dic3= {5:50, 6:60}*

*dic1={1:10, 2:20}*

*dic2={3:30, 4:40}*

*dic3={5:50,6:60}*

*dic4 = {}*

*for d in (dic1, dic2, dic3): dic4.update(d)*

*print(dic4)*

*Output:*

*{1: 10, 2: 20, 3: 30, 4: 40, 5: 50, 6: 60}*

*5. Write a Python script to check whether a given key already exists in a dictionary.*

*d = {1: 10, 2: 20, 3: 30, 4: 40, 5: 50, 6: 60}*

*def is\_key\_present(x)*

*if x in d:*

*print('Key is present in the dictionary')*

*else:*

*print('Key is not present in the dictionary')*

*is\_key\_present(5)*

*is\_key\_present(9)*

*Output:*

*Key is present in the dictionary*

*Key is not present in the dictionary*

