Python – Problem Sheet - Dictionary and its Operations

1. Write a program to convert each list element to key-value pair.

Sample input and output:

```
The original list is : [2323, 82, 129388, 234, 95]
Constructed Dictionary : {23: 23, 8: 2, 129: 388, 2: 34, 9: 5}
```

2. Execute the following code and observe the output.

```
# Initialising dictionary
x = {b'EmplId': b'12345', b'Name': b'Paras', b'Company': b'Cyware'}

# Converting
x = { y.decode('ascii'): x.get(y).decode('ascii') for y in x.keys() }

# printing converted dictionary
print(x)
```

3. Write a Python script to sort (ascending and descending) a dictionary by value.

Sample input and output:

```
Original dictionary :  {1: 2, 3: 4, 4: 3, 2: 1, 0: 0}
Dictionary in ascending order by value :  [(0, 0), (2, 1), (1, 2), (4, 3), (3, 4)]
Dictionary in descending order by value :  {3: 4, 4: 3, 1: 2, 2: 1, 0: 0}
```

4. Write a Python script to concatenate following dictionaries to create a new one.

Sample Dictionary :
dic1={1:10, 2:20}
dic2={3:30, 4:40}
dic3={5:50,6:60}
Expected Result : {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.

6. Write a Python program to sum all the items in a dictionary. Print the result.

7. Write a Python program to multiply all the items in a dictionary. Print the result.

8. Write a Python program to get the maximum and minimum value in a dictionary. Print the results.

9. Write a Python program to remove duplicate items from a given dictionary. Print the sample input and outputs.

10. Write a Python program to combine two dictionary adding values for common keys.
Sample input and output:

d1 = {'a': 100, 'b': 200, 'c':300}
d2 = {'a': 300, 'b': 200, 'd':400}
Sample output: Counter({'a': 400, 'b': 400, 'd': 400, 'c': 300})