**CO1 Programs**

17. Sort dictionary in ascending and descending order.

import operator

d={1:2,3:3,4:3,2:1,0:0}

print("original dictionary:",d)

sorted\_d=sorted(d.items(),key=operator.itemgetter(1))

print("dictionary in ascending order by value",sorted\_d)

sorted\_d=dict(sorted(d.items(),key=operator.itemgetter(1),reverse=True))

print("dictionary in descending order by value:",sorted\_d)

Output

original dictionary: {1: 2, 3: 3, 4: 3, 2: 1, 0: 0}

dictionary in ascending order by value [(0, 0), (2, 1), (1, 2), (3, 3), (4, 3)]

dictionary in descending order by value: {3: 3, 4: 3, 1: 2, 2: 1, 0: 0}

18. Merge two dictionaries.

d1 ={ 'a': 100, 'b': 200}

d2 ={'x' : 300, 'y': 200}

print ("Dictionary 1=:", d1)

print ("Dictionary 2-: ", d2)

d =d1. copy ()

d.update (d2)

print ("Merged Dictionary: ", d)

Output

Dictionary 1=: {'a': 100, 'b': 200}

Dictionary 2-: {'x': 300, 'y': 200}

Merged Dictionary: {'a': 100, 'b': 200, 'x': 300, 'y': 200}

**CO2 Program**

11. Write lambda function to find area of square ,rectangle,triangle.

import math

t\_area=lambda b,h:1/2\*b\*h

r\_area=lambda l,b:l\*b

s\_area=lambda a:a\*a

print("area of triangle:",t\_area(10,20))

print("area of rectangle:",r\_area(30,20))

print("area of square:",s\_area(15))

Output

area of triangle: 100.0

area of rectangle: 600

area of square: 225