**1 find out the data type of name and c variable. Hint(type)**

**2. assign multiple value to multiple variables in single line**

**3. write a program to take a integer as x and display its table upto 10: format should be.**

2\*1 = 2

2\*2 = 4

**4 .str1 = "python program"**

**print(str1[3:])**

**print(str1[:2])**

**remove white spaces from left and right side, check length..**

**convert str1 to lower and upper case.**

**find how many words are there. #split()**

**5 .WAP in Python to remove all duplicate elements in a list.**

**6. write a program which take sentence as string, print count words in a given sentence?**

**7. WAP to make a list of even\_number using list comprehension**

**8. WAP to generate list of number in the range 2-80 that are divisible by 2 & 4.**

**9.WAP to create lambda function that takes two(x,y) integers/float value and return x+y.**

**10. l1 = [10,20,2,3,5,6,8,9,7,25],make a new list thats contain all even number using filter function.**

**11. l1 = [10,20,2,3,5,6,8,9,7,25],create new list by increasing list element by 2, using map function**

**12. find the largest number among three received number.**

**13. Suppose a list contain several words, WAP to create new list that contain first character of each words.**

**14. WAP to read a string from, keyboard, and create dictionary containing frequency of each character**

**occurring in the string. ex,str = "apple", dict1 = {'a':1,'p':2,'l':1,'e':1}**

**3 . Create 2-D array of size 5,3 name A2, perform below task:**

**A. Check size of A2**

**B. Check shape of A2**

**C. if dtype is int ,change it to float.**

**D. print total element of A2.**

**4. create zeros ones, twos, threes arrays, shape should be (5,3)**

**hint: zeros,ones**

**5. Create 1-D array of size 30 element, reshape it in below shape.**

**Hint: a1.reshape(row,col)**

**A. 10 rows ,3 columns**

**B. 3 rows, 10 columns**

**C. 15 rows,2 columns**

**Pandas:**

**dict\_list = {**

**"id" : [101,102,103,104,105,106],**

**"name" : ["apple","orange","mango","date","banana","pineapple"],**

**"price" : [120,130,140,150,160,170],**

**"city" :["meerut","kanpur","mumbai","delhi","indore","goa"],**

**"state" :["up","mp","maharashtra","kerala","gujrat","asam"],**

**"country" : "india"}**

**1. create data frame using above data name should be data**

**2. Check the below attributes of data Frame**

**A. check columns attribute**

**B. check dtypes attribute**

**C. check shape attribute**

**3. perform the below operations**

**A. data.index = list('abcdef')**

**B. data.loc['b','city']**

**C. data.loc['b':'e',:]**

**D. data.loc[:,:]**

**E. data.loc[['a','c'],['id','city']]**

**F. data.iloc[1,3]**

**G. data.iloc[:,[0,3]]**

**H. data.at['b','price'], data.iat[3,3]**

**4. Perform the below opearion.**

**A. Get all records that have price < 150 #Hint data[data['column'] > 150]**

**B add one more columns : color: ["red","green","blue","red","green","blue"]**

**C. Get all records that have price >140 and color == 'green"**