Question 1

What data type is each of the following?

Ans:-

5

int

5.0

float

5>1

Boolean

5//2

Boolean

5\*2

int

‘5’\*2

str & int

‘5’+’2’

str

5/2

float

[5,2,1]

list

5 in [1,4,6]

Boolean

Math.pi

float

Ques2

Write (and evaluate) Python expressions that answer these questions:

1. (a) How many letters are there in 'Supercalifragilisticexpialidocious'?

s = 'supercalifragilisticexpialidocious'

len(s)

34

1. (b) Does 'Supercalifragilisticexpialidocious' contain 'ice' as a substring?

>>> word='supercalifragilisticexpialidocious'

>>> result=word.find('ice')

>>> print("Substring 'ice' foundat index:",result)

Substring 'ice' foundat index: 18

(d)

>>> a=['Berlioz','Borodin','Brian','Bartok','Bellini','Buxtehude','Bernstein']

>>> print("composer comes first",a[0])

composer comes first Berlioz

>>> print("composer comes last",a[-1])

composer comes last Bernstein

(c )

words=["Supercalifragilisticexpialiadocious","Honorificabilitudinitatibus","Bababadalgharaghtakamminarronnkonn"]

sortedwords = sorted(words, key=len)

print ("The longest word in the list is: %s." % (sortedwords[-1],))

Quest 3 a

**b = (x1 < x < x2) and (y1 < y < y2)**

quest 5

Filebloodtype1.txtrecords blood-types of patients (A, B, AB, O or OO) at a clinic.Write a functionbldcount()that reads the file with namenameand reports (i.e., prints)how many patients there are in each bloodtype.>>> bldcount('bloodtype.txt')

There are 10 patients of blood type A.There is one patient of blood type B.There are 10 patients of blood type AB.There are 12 patients of blood type O.There are no patients of blood type OO.

def bldcount(filename):

infile=open(filename, 'r')

content= infile.read()

infile.close()

content=content.split()

bloodtype = ['A','B','AB','O','OO']

for i in bloodtype:

if content.count(i)==0:

print('There are no patients of blood type',i+'.')

elif content.count(i)==1:

print('There is one patient of blood type',i+'.')

else:

print('There are',content.count(i),'patients of blood type', i+'.')

bldcount('bloodtype.txt')

ques 6

print ("Pound Sterling converter")

print ("You can convert pounds to either dollars, euros or yen")

print

dollar = "dollar"

euro = "euro"

yen = "yen"

convert\_to = input ("What currency do you want to convert to? ")

amount = input("How much would you like to convert? ")

print

if convert\_to == "dollar":

amount = float(amount) \* 1.3

elif convert\_to == "euro":

amount = float(amount) \* 1.17

elif convert\_to == "yen":

amount = float(amount) \* 133.66

else:

print ("You must pick either dollar, euro or yen.")

print (amount)

ques 4

# Python program to encode a word to a Pig Latin.

def isVowel(c):

return (c == 'A' or c == 'E' or c == 'I' or

c == 'O' or c == 'U' or c == 'a' or

c == 'e' or c == 'i' or c == 'o' or

c == 'u');

def pigLatin(s):

# the index of the first vowel is stored.

length = len(s);

index = -1;

for i in range(length):

if (isVowel(s[i])):

index = i;

break;

# Pig Latin is possible only if vowels

# is present

if (index == -1):

return "-1";

# Take all characters after index (including

# index). Append all characters which are before

# index. Finally append "ay"

return s[index:] + s[0:index] + "ay";

str = pigLatin("happy");

if (str == "-1"):

print("No vowels found. Pig Latin not possible");

else:

print(str);

output

Python 3.8.5 (tags/v3.8.5:580fbb0, Jul 20 2020, 15:43:08) [MSC v.1926 32 bit (Intel)] on win32

Type "help", "copyright", "credits" or "license()" for more information.

>>>

=== RESTART: C:/Users/hitek/AppData/Local/Programs/Python/Python38-32/abcd.py ==

**appyhay**

>>>

Quest 10

def findArea(a,b,c):

# must be smaller than third side.

if (a < 0 or b < 0 or c < 0 or (a+b <= c) or (a+c <=b) or (b+c <=a) ):

print('Not a valid trianglen')

return

# calculate the semi-perimeter

s = (a + b + c) / 2

# calculate the area

area = (s \* (s - a) \* (s - b) \* (s - c)) \*\* 0.5

print('Area of a traingle is %f' %area)

# Initialize first side of traingle

a = 2.0

# Initialize second side of traingle

b = 2.0

# Initialize Third side of traingle

c = 2.0

findArea(a,b,c)

