FIRST SEMESTER MCA (2020 SCHEME) PRACTICAL EXAMINATION JUNE-JULY 2021

20MCA131 PROGRAMMING LAB

Date: 2-07-2021 Reg:NO: ICEMCA-2037

Time: 1 pm - 4 pm BATCH 2: SET A

QUESTIONS

1. List ordinal value of each element of a word
2. Create a package graphics with modules rectangle, circle and subpackage 3D-graphics with modules cuboid and sphere. Include methods to find area and perimeter of respective figures in each module Write programs that find area and perimeter of figure by different important statement.

(1) List ordinal value of each element of a word

PROGRAM

```
list1 = ['shee','lee','reshi']
print("The orginal list :\n" + str(list1))
res = [ord(ele) for sub in list1 for ele in sub]
print("The ascii list is : \n "+ str(res))
```

EXPECTED OUT PUT

The orginal list
['shee', 'lee', 'reshi']
The ASCII LIST IS:
[100, 120, 130 ....]

OUTPUT

The orginal list
['shee', 'lee', 'reshi']
The ASCII LIST IS:
[115, 104, 101, 101, [01, 114, 101], 115, 104, 105]

ALGORITHM

step 1 : start
step 2 : Read words
step 3 : print orginal list
step 4 : ordinal elements
for sub in list for
elements in sub
step 5 : print 'ASCII value
step 6 : stop

(2) Create a package graphics with module reetangle, circle and sub package 3D-graphics with modules cuboid and sphere. Include methods to find area and perimeter of figure by different importing statemant

PROGRAM

Packages: Graphics

Circle

```
#circle area
def c Area (r):
    result = 3.14 * r ** 8
    return result

#circle perimete
    def cperimeter(r)
```

Rectangle

```
#Area of rectangle
    def Recarea(w,l):
        result = w*l
        return result.
#perimeter of rectangle
    def Rperimetr(w,l):
        result = 2 * (l+w)
        return result.
```

Sub-package : 3D graphics

Cuboid

```
#Area of cuboid
    def Acuboid(a):
        result = 6* a*a
        return result.
#perimeter of cuboid
    def pcuboid(l,b,h)
        result=4*(l+b+h)
        return result.
```

Sphere

```
#area and perimeter of sphere fun.
    def Asphere(r):
        result = 4*3.14*r*r
        return result
```

```
# perimeter fun.
    def  pshere (r):
      result = (4/3) * 3.14 * r**r
      return result

Graphics Main.py

from graphics.rectangle AP function import *
from graphics.Circle APFunction import*
from graphics.dgraphics.Cuboid APFuncten import*
from graphics.dgraphics.Sphere AP Function import*

num1 = int (input ("enter length of rectangle"))
num2 = int (input ("enter breadth of rectangle"))
print ("area = ", Recarea (num1, num2))
print ("perimeter= ", Rperimeter (num1, num2))
radius = int (input ("enter the radius of a circle"))
print ("circle area = ", CArea (radius))
print ("circle peimeter =", Cpeimeter (radius))
radius = int (input ("enter radius of sphere"))
print ("area of sphere =", Asphere (radius))
print ("penimeter of sphere=", Psphere (radius))

edge= int (input ("enter the edge of cuboid"))
l= int (input ("enter the length of cuboid"))
b= int (input ("enter the breadth of cuboid"))
h = int (input ("enter the haght of cuboid"))
```

Print ("area of cubad", Acuboid (edge))
Print ("perimeter of cubad", Pcuboid (l,b,h))

ALGORITHM

Step 1: start

Step 2: ~~Read~~ state variables

Step 3: Import from module graphics main.

Step 4: Read values of variable from keyboard

step 5: Display area and perimeter

step 6: call function

step 7: calculate the values

step 8: Display output

step 9: stop

EXPECTED OUTPUT

Enter length of rectangle 5
Enter the breadth of rectangle 2
area = 10
Perimeter = 14
Enter the radius of circle 6
Circle area = 113.0399 99999
Circle perimeter = 37.68

Enter radius of sphere 7
area of sphere 7 = 6
Perimeter of sphere = 1436.026666
Enter edge of abad 9
Enter length of cubad 9
Enter breadth of cuboid 6
Enter height of cubad 4
Area of cubad 4
Perimeter of cuboid - - -

OUTPUT

Enter the length of rectangle 4
Enter the breadth of rectangle 3
area = 12
Perimeter = 14
Enter radius of circle 6
circle area = 113.0899999
Circle area = 37.68
Enter the radius of sphere 3
sphere Area of sphere = 113.03999
Perimeter/Area of sphere = 113.039999
Enter edge of cuboid - 3
Enter lengths of cuboid 5
Enter breadths of cuboid 8
Enter height of cuboid 9
Area of cuboid 54
Perimeter of cuboid 58