```
#Function Definition
import math
func=input('Enter given function: ')
a=float(input('Enter lower range value a: '))
b=float(input('Enter upper range value b: '))
def f(x):
    y=eval(func)
    return(y)
# Process and output section
print ('As per Intermediate Value Theorem')
if f(a)*f(b)<0:
  print('Atleast one root lies in the interval [a, b]=',a,b)
elif f(a)*f(b)==0:
  print('any one initial value may the root')
else:
  print('No root lies in the interval [a, b]=',a, b)
```

Result:

```
Enter given function: math.cos(x)-x*math.exp(x)
Enter lower range value a: 0
Enter upper range value b: 1
As per Intermediate Value Theorem
Atleast one root lies in the interval [a, b]= 0.0 1.0
```