

## Assignment-5

Write a program for Golden Search method and Fibonacci search method to find the maximum of the function given below within the interval  $x_{l1} = 0$  and  $x_{u1} = 4$ .

$$f(x) = 2 \sin x - \frac{x^2}{10}$$

with  $\varepsilon = 0.05$ .

Note:- You need to carry out the n iteration such that the length of the last iteration i.e.

$$I_n = x_{un} - x_{ln} \leq \varepsilon$$