**Algorithm for Fixed Point Iteration Method**

Here f(x) is given function and is expressed as x=g(x),x0 is the initial approximations,epsilon is the prescribed tolerance,and n is the maximum number of iterations permitted.

1. Start
2. Define function f(x)
3. Define function g(x) which is obtained

from f(x)=0 such that x=g(x) and

|g’(x)<1|

1. Input
2. read: x0,n
3. read: epsilon
4. for i=1 to n by 1 do

set x1 = g(x0)

set relative\_error=|((x1-x0)/x1)|

set x0 = x1

if(relative\_error<=epsilon) then

write: “Root converges

in”,I,”iterations”

write: x1,”as the appro-

ximate root”

exit

endif

endfor

1. write: ”Root does not converge

in”,n,”iterations”

1. Stop