

ASSIGNMENT NO:-

PROGRAM NO:-

%Program: NEWTON RAPHSON METHOD

%Name:

%Roll No.:

%I/P: Fuction, f'x, f''x, initial guess, accuracy, max iterations

```
function[]=PSJ_NRM(fun,dfun,ddf,fun,x0,acc,maxitr)
g=(feval(fun,x0)*feval(ddfun,x0))/(feval(dfun,x0)^2);
while abs(g)>1
x0=input('Enter new value of x0\n');
g=(feval(fun,x0)*feval(ddfun,x0))/(feval(dfun,x0)^2);
end
itr=1;
while itr<=maxitr
x1=x0-(feval(fun,x0)/feval(dfun,x0));
acc_cal=abs(x1-x0);
if acc_cal<acc
break
else x0=x1;
itr=itr+1;
end
end
fprintf('Root of eqn is %f\n',x1);
```

%PSJ_NRM(@(x) x^3+x-1,@(x) 3*x^2+1,@(x) 6*x,0,10^-15,5)

%Root of eqn is 0.682328

%fzero(@(x) x^3+x-1,0)

%ans =

%0.6823