3.

# P ROGRAM:

clc; clear all;

n=input('enter number of buses:'); l=input('number of lines:'); s=input('1:Impedance or 2:admittance'); ybus=zeros(n,n);

lc=zeros(n,n);

for i=1:I

a=input('starting bus:'); b=input('ending bus:');

t=input('admittance or impedance of lines') ; lca=input('line charging admittance:'); **if(S==1)**

y(a,b)=1/t;

else

y(a,b)=t; end y(b,a)=y(a,b); lc(a,b)=lca; lc(b,a)=lc(a,b);

end

for i=1:n for j=1:n

if i==i

for k=1:n

ybus(i,j)=ybus(i,j)+y(i ,k)+lc(i,k)/2; end

else

ybus(i,j)=-y(,ij); end ybusU,i)=ybus(i,j);

end

end ybus

# OUTPUT:

enter number of buses:4 number of lines:5 1:Impedance or 2:admittance1 starting bus:1

ending bus:2

admittance or impedance of lines0.2+0.8\*j line charging admittance:0.02\*j

starting bus:2 ending bus:3

admittance or impedance of lines0.3+0.9\*j

line charging admittance:0.03\*j starting bus:2

ending bus:4

admittance or impedance of lines0.25+1\*j line charging admittance:0.04\*j

starting bus:3

ending bus:4

admittance or impedance of lines0.2+0.8\*j line charging admittance:0.02\*j

starting bus:1 ending bus:3

admittance or impedance of lines0.1+0.4\*j line charging admittance:0.01\*j

ybus =

0.8824 - 3.5144i -0.2941 + 1.1765i -0.5882 + 2.3529i 0.0000 + 0.0000i

-0.2941 + 1.1765i 0.8627 - 3.0726i -0.3333 + 1.0000i -0.2353 + 0.9412i

-0.5882 + 2.3529i -0.3333 + 1.0000i 1.2157 - 4.4994i -0.2941 + 1.1765i

0.0000 + 0.000Oi -0.2353 + 0.9412i -0.2941 + 1.1765i 0.5294 - 2.0876i