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COURSE: B.Sc(hons.)Physics

ROLL NO.: 81

**SOURCE CODE:**

clc;

clear;

clf;

for i=1:3

for j=1:4

A(i,j)=input("enter value of coefficient of A["+string(i)+","+string(j)+"]=")

end

end

if (A(1,1)==0) then

t=A(1,:)

A(1,:)=A(2,:)

A(2,:)=t

end

if (A(2,2)==0) then

t=A(2,:)

A(2,:)=A(3,:)

A(3,:)=t

end

if (A(3,3)==0) then

t=A(3,:)

A(3,:)=A(1,:)

A(1,:)=t

end

disp(A,"pivoted matrix is")

a21= A(2,1);a11= A(1,1);a31=A(3,1);

for i=1:4

A(2,i)=[A(2,i)- ((a21)/(a11))\*A(1,i)];

A(3,i)=[A(3,i)- ((a31)/(a11))\*A(1,i)];

end

a32=A(3,2);a22=A(2,2);

for i=1:4

A(3,i)=[A(3,i)- ((a32)/(a22))\*A(2,i)];

end

disp(A,"upper triangular matrix is")

for i=3:-1:1

k=A(i,4)

for j=3:-1:i+1

if j>i then

k=k-A(i,j)\*x(j)

end

j = j+1

end

x(i)=k/A(i,i)

end

disp("result is =")

for i=1:3

disp("x["+string(i)+"]="+string(x(i)))

end

**OUTPUT:**

