**CALCULATION OF CORONA LOSS**

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**MATLAB CODE :**

clc

clear all

close all

%Losses due to corona

f=input('Enter the operating frequency of the transmission line in hertz : ');

r=input('Enter the radius of conductor in cm:');

d=input('Enter the distance between conductors in cm : ');

b=input('Enter the barometric pressure/cm in Hg:');

t=input('Enter the temperature of the surrounding in celsius :');

Vph=input('Enter the phase voltage in KV of transmission line:');

m=input('Ente the surface factor of the conductor : ');

g=21.21; %KV/phase

p=3.92\*b/(273+t); %air density factor

Vc=m\*g\*r\*p\*log(d/r) %critical distruptive voltage

Pc=241\*((f+25)/p)\*(r/d)^(1/2)\*(Vph-Vc)^2\*10^(-5);

if Vph>Vc

display Pc

fprintf('\n The power loss due to corona in KW/phase/km is %f KW/phase/Km \n',Pc)

else

display Pc=0 %Because phase voltage is lower than critical distruptive voltage

end

Example:

