

# King Fahd University of Petroleum & Minerals

Electrical Engineering Department

## EE 465: Power System Transmission & Distribution

(First Semester 051)

Quiz# 4: November 20, 2005

A 320-km, 500 kV, 60-Hz, three phase uncompensated line has a positive sequence series reactance  $x = 0.34 \text{ ohm/km}$  and a positive sequence shunt admittance  $y = j 4.5 \times 10^{-6} \text{ S/km}$ . Neglecting losses, calculate:

a) Characteristics impedance =

b) Propagation constant =

c) wavelength of the line =

d) Three phase surge impedance loading =