

# KING FAHD UNIVERSITY OF PETROLEUM & MINERALS

## ELECTRICAL ENGINEERING DEPARTMENT

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EE-360

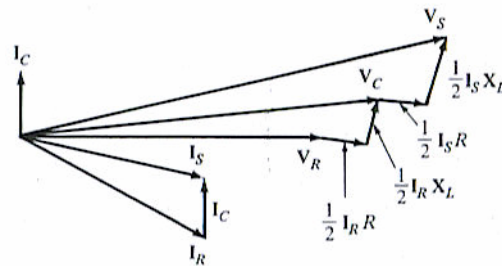
### Key Solution

Quiz # 9      Serial #

Name:

I.D.#

1) The figure below shows the phasor diagram of



- a) a pi-nominal transmission line with lagging power factor load.
- b) a pi-nominal transmission line with leading power factor load.
- c) a T-nominal transmission line with lagging power factor load.**
- d) a T-nominal transmission line with leading power factor load .

2) A 60 Hz, 3-phase, transmission line is 40 miles long with a total series impedance of  $(35 + j 140)$  Ohm. It delivers 40 MW at 220 kV and 0.9 power factor lagging. The power factor at the sending end is :

- a. 0.51 lagging
- b. 0.88 lagging
- c. 0.48 lagging
- d. 0.86 lagging**