



SNS COLLEGE OF TECHNOLOGY

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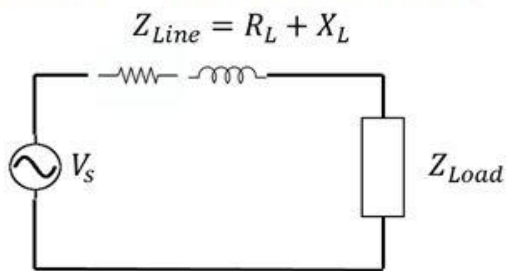
DEPARTMENT OF ECE

SUBJECT CODE : 16EC302 SEM / YEAR : V / III

SUBJECT NAME : TRANSMISSION LINES & WAVE GUIDES

PUZZLE ON LINE PARAMETERS

A Transmission line supplying a voltage V_s to a load can be modelled as shown in figure below:



The Resistance and Inductance of the transmission line is: 1Ω and 6 mH and the load is series combination of resistor and a capacitor with values 20Ω and $150 \mu\text{F}$. For $V_s = 220 \angle 0^\circ \text{rms}$, find:

- Apparent power delivered by the source
- Apparent power absorbed/received by the load
- Power factor of the load and the source
- Real and reactive power of the load.