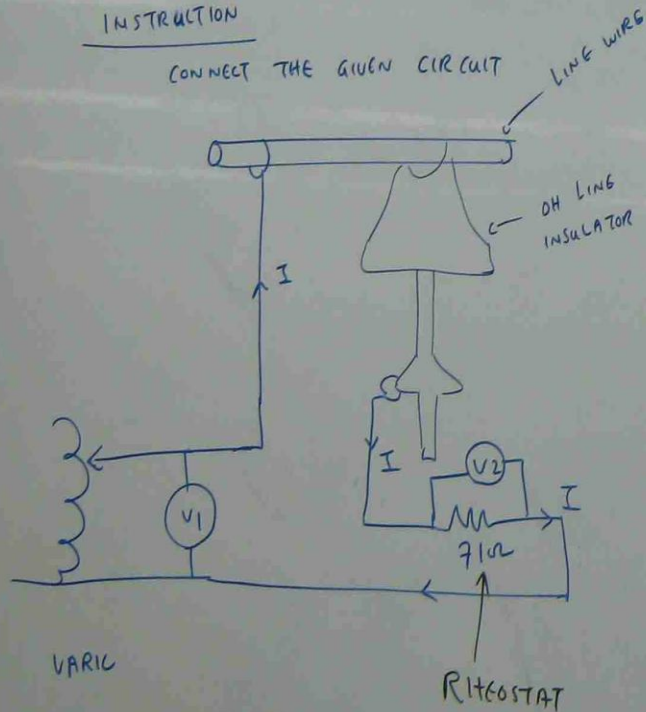


PRACTICAL (2) ELECTRICAL DISTRIBUTION (FOR TEST 2)

MEASUREMENT OF OVER HEAD LINE INSULATOR CAPACITANCE

INSTRUCTION

CONNECT THE GIVEN CIRCUIT



INJECT $V_1 = 80V$

MEASURE $V_2 =$

$$I = \frac{V_2}{\text{RHEOSTAT RESISTANCE (71}\Omega\text{)}}$$

$$X_c = \frac{V_1 - V_2}{I}$$

$$C_{80V} = \frac{1}{2\pi f X_c}$$

SUBSTITUTE $f = 50\text{Hz}$

REPEAT FOR $V_1 = 90V$ & $100V$

V_1	V_2	$V_1 - V_2$	$I = \frac{V_2}{71\Omega}$	$X_c = \frac{V_1 - V_2}{I}$	$C = \frac{1}{2\pi f X_c}$
80V					$C_{80V} =$
90V					$C_{90V} =$
100V					$C_{100V} =$

$$C = \frac{C_{80} + C_{90} + C_{100}}{3} \text{ F}$$

THEN SWITCH OFF THE SUPPLY AND OBSERVE WHAT HAPPENS TO V_1 ?

QUESTION

THE LINE INSULATOR IS RECENTLY TAKEN OUT FROM THE LINE. WHAT WILL YOU DO BEFORE TOUCHING IT?

