2016 TST Exam Formula Sheet

P: watts
R: ohms
I: amps
E: volts

$P = I \times E$

$E = I \times R$

$I = \frac{E}{R}$ $R = \frac{E}{I}$ $\frac{E^2}{P} = R$ $\frac{E^2}{R} = P$

Phase to neutral volts x 1.73 = Phase to Phase volts mph to fps = mph x 1.47

where K = 12.9 for copper and 21.2 for aluminum db= 10log (P1/ P2)

t = RC X = XL – XC CT = C1 + C2 + C3 B = f2 – f1

I = V / XL $X_L = 2\pi fL$ RT = R1 + R2 + R3 Ip= Es x Is/ Ep

Rt = R1xR2/R1+R2 $L_T = 1/(1/L_1)+(1/L_2)$ $L_T = L_1 + L_2$

$Xc = \frac{1}{2\pi fC}$ $Y = 1\ \text{sec} + \left(\frac{V}{20 + 64.4G}\right)$ $R = \frac{K \times L}{CM}$ $AR = \frac{W + L}{V}$

$CT = \frac{1}{\frac{1}{C1} + \frac{1}{C2} + \frac{1}{C3}}$ $RT = \frac{1}{\frac{1}{R1} + \frac{1}{R2} + \frac{1}{R3}}$ $\frac{W \times H}{1000} = KWH$

$Z = \sqrt{R^2 + X^2}$

$PF = \frac{\text{Output}}{\text{Input}}$ $PF = \frac{\text{True Power}}{\text{Apparent Power}}$ $C = \frac{K_a}{D}$ $\lambda = \frac{V}{f}$

$\frac{HPX5252}{RPM}$ $Vd = \frac{2LKI}{C_m}$ $CM = \frac{2K \times L \times I}{Vd}$ Vavg = .637 x Vpk

$\frac{EP}{ES} = \frac{TP}{TS} = \frac{IS}{IP}$ $P = \frac{(F)(120)}{RPM}$ $fr = \frac{1}{2\pi\sqrt{LC}}$

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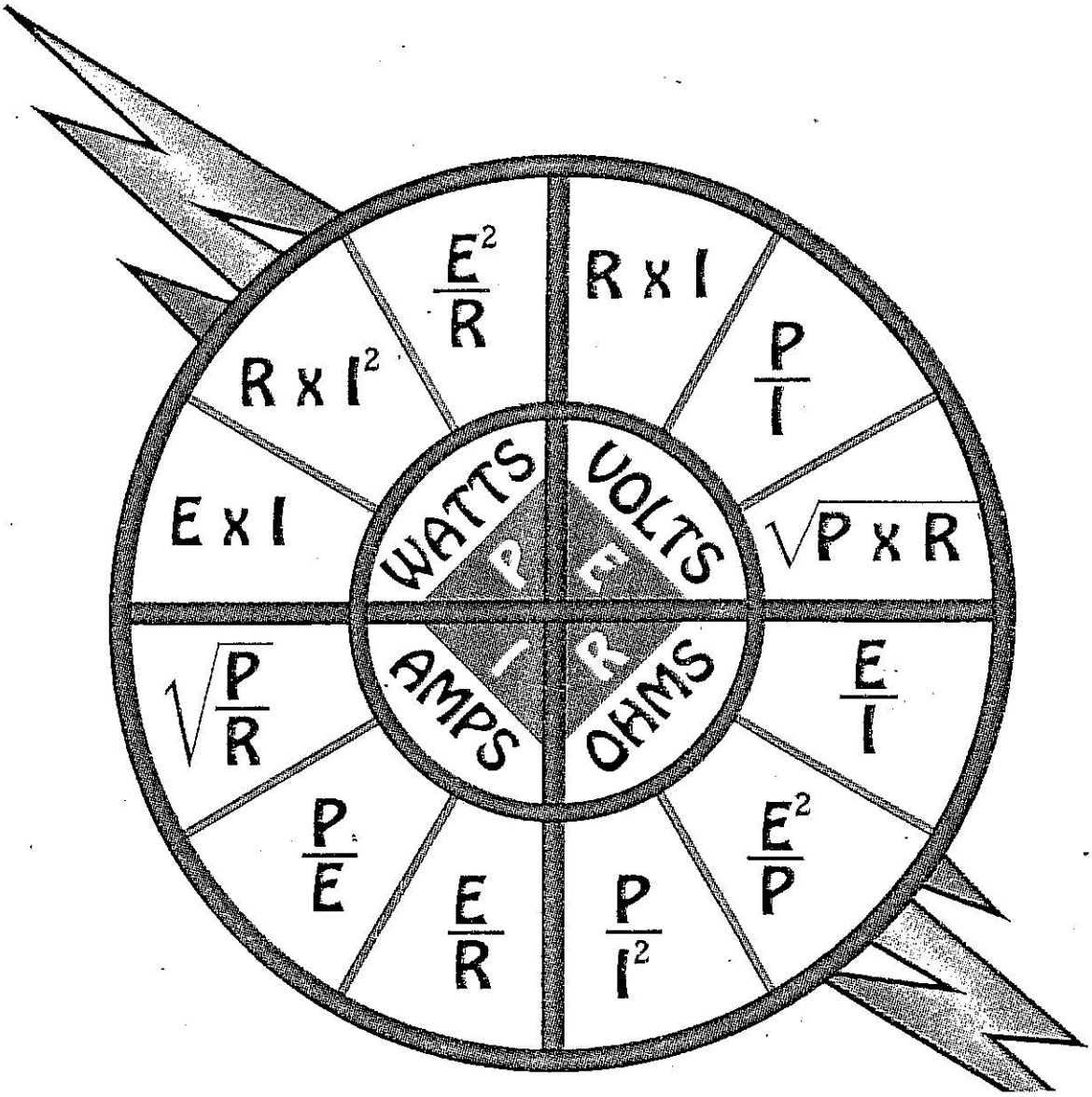
ELECTRICAL REFERENCES