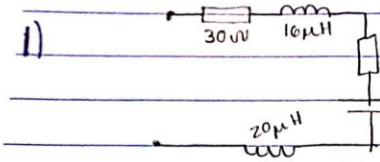
Edmundo Henrique de Paiva Silva 675 GEB

1)



$X_L = 2\pi \cdot 127{,}92K \cdot 36\mu \Rightarrow X_L = 28{,}93$

$X_C = \frac{1}{2\pi \cdot 127{,}92K \cdot 43n} \Rightarrow X_C = 28{,}93\ \Omega$

$R \quad \frac{1}{2\pi\sqrt{43n\,36\mu}} \Rightarrow 127{,}92[KHz]$

$\dot{Z} = 47 - j28{,}93 + j28{,}93\ \Omega$

2) $f_0 = 127{,}9[KHz] \Rightarrow \frac{1}{2} \cdot f_0 = 63{,}9[KHz]$

$X_C = \frac{1}{2\pi \cdot 63{,}9K \cdot 43n} = 57{,}92\Omega \quad X_L = 2\pi \cdot 63{,}9K \cdot 36\mu = 14{,}45\Omega$

$47 - j57{,}92 + j14{,}45$

$\dot{Z} = 47 - j43{,}47\ \Omega$

3) $f_0 = 127{,}9[KHz] \Rightarrow f_0 \cdot 2 \Rightarrow 255{,}8[KHz]$

$X_C = \frac{1}{2\pi \cdot 255{,}8K \cdot 43n} = 14{,}47\Omega \quad X_L = 2\pi \cdot 255{,}8K \cdot 36\mu = 57{,}86\Omega$

$\dot{Z} = 47 - j14{,}47 + j57{,}86$

$\dot{Z} = 47 + j43{,}39\ \Omega$