كلية التقنية الالكترونية
College of Electronic Technology - Tripoli

القســـم....العـــــــــام..... أسئلة الامتحان النهائي لمادة : دوائر كهربية 2
لطلبة الفصل: ...الثاني.... رمز المادة.....EE102 ..... التاريخ 10 /04 /2022
الفصل الدراسي خريف...-20222021..... اسم الأستاذ/المنسق : .....مـــحـــمـــد الشـاوش.... ..الزمن.....ســاعـــتان.....
اسم الطالب :..... رقم القيد ..... المجموعات: 1+2+3+4

Q1)- complete the following **{14 Marks}**

a)- The resistive circuit has .....power factor, because ..... . **{2 Marks}**

b)- The frequency is ..... **{2 Marks}**

c)- Given that $v(t)= 30\cos(377t - 60^0)$ and $i(t)= 5\sin(377t +60)$, then the value of element or elements are .....because v.....i.....**{3 Marks}**

d)- Two parallel impedances $Z_1=4 +j6$ and $Z_2= 2 - j3$, then $Y_T =$ .....(S). **{3 Marks}**

e)- Given $i(t) = 50\sin(2\pi\, 60\, t + 20)\ A$

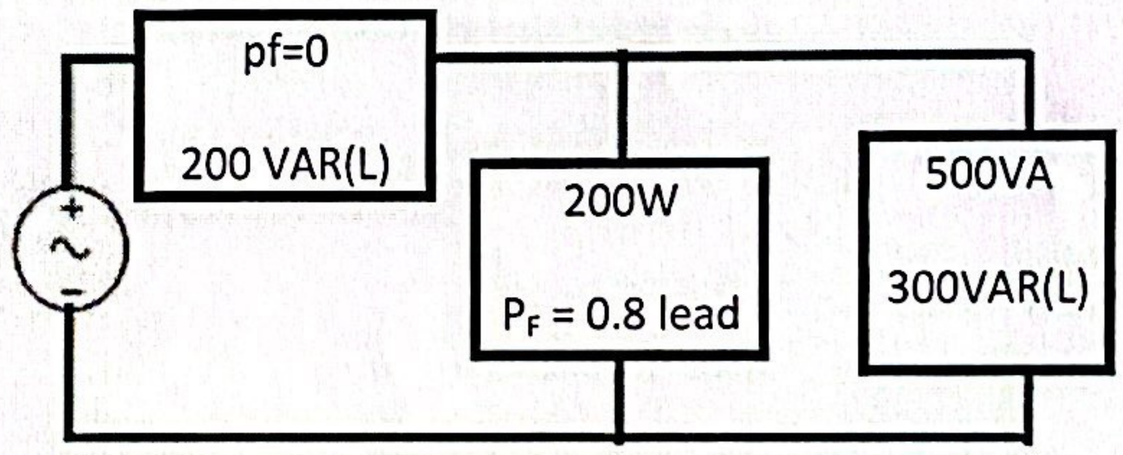
Then the frequency is .....,the Period is .....,the average value is .....
and the effective value is ..... **{4 Marks}**

Q2)- For the system shown **{12Marks}**

1- Draw the power triangle **{8 Marks}**

2- Determine the total current. **{2 Marks}**

3- Determine the total P_F. **{2 Marks}**

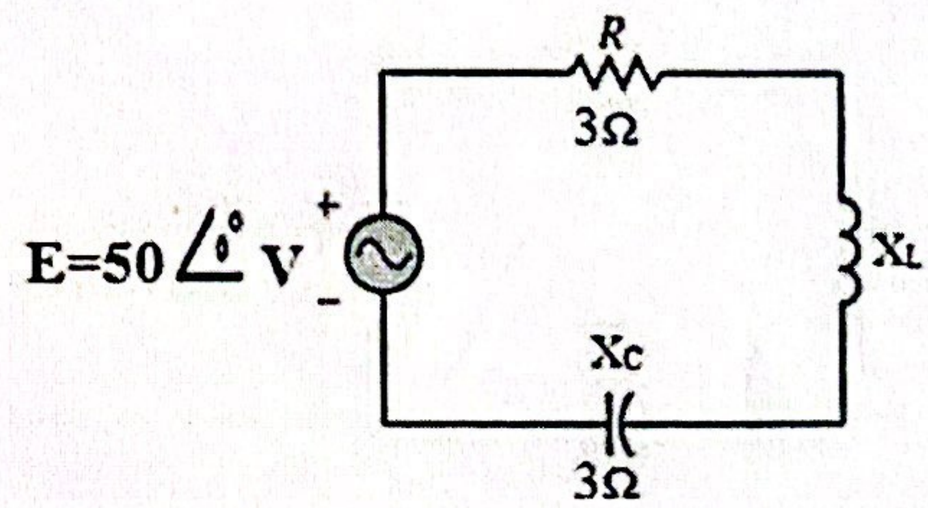


Q3)- in the circuit shown, **{12 Marks}**
Given that: $P_F= 0.6$ lagging,
and the magnitude of $Z_T= 5\Omega$.

a)- Determine the value of X_L. **{4 Marks}**

b)-Draw the impedance diagram. **{4 Marks}**

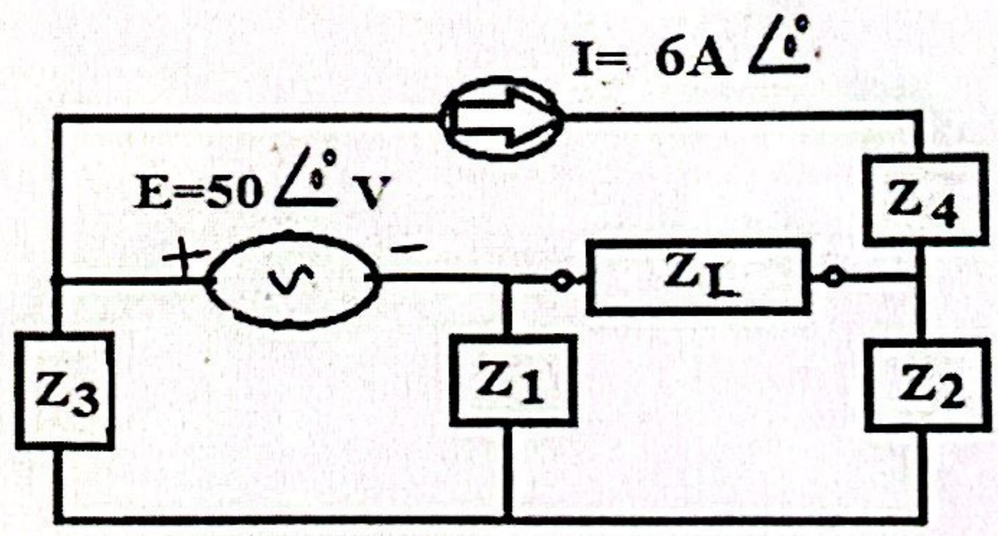
c)- Draw phasor diagram. **{4 Marks}**



Q4)- For the circuit **{12 Marks}**
shown in the figure.
Z1=2+J2 , Z2= 2 Ω,
Z3= -J2 and Z4=2 +J4

a)-Determine the value of Z_L for maximum power to the Load. **{5 Marks}**

b)-Find $P_{max.}$ **{7 Marks}**



تمنياتنا للجميع بالتوفيق

Scanned with CamScanner