**Assignment**

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| **Name** | **AHAHAHAHAHAHAHAAAASASAHAH** |
| **Lecturer** |  |
| **Date of issue** |  |
| **Due date** |  |

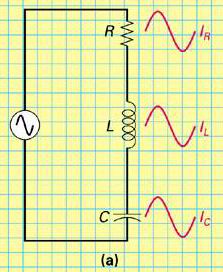
***Complete the attached problems.***

***You must show formulae used to calculate answers.***

***You must draw the phasor diagrams.***

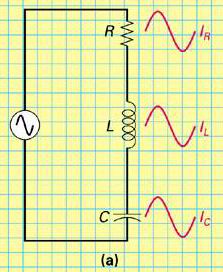
***You must show all answers with correct units of measurement.***

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| ***f = 100Hz*** |
| ***Va = 230v*** |
| ***C = 3.3uF*** |
| ***L = 2.5H*** |
| ***R = 1800Ω*** |

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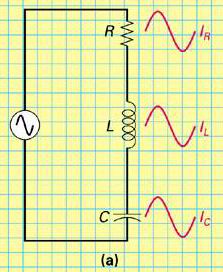
|  |
| --- |
| XL |
| Xc |
| XT –  Draw phasor diagram. |
| Z |
| IT |
| VR |
| VL |
| Vc |
| Phase angle |
| Power factor |

|  |
| --- |
| ***f = 50Hz*** |
| ***Va = 230v*** |
| ***C = 68uF*** |
| ***L = 82mH*** |
| ***R = 32 Ω*** |

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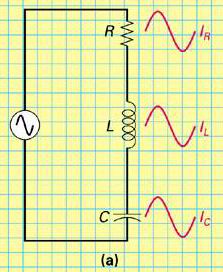
|  |
| --- |
| XL |
| Xc |
| XT –  Draw phasor diagram |
| Z |
| IT |
| VR |
| VL |
| Vc |
| Phase angle |
| Power factor |

|  |
| --- |
| ***f = 1kHz*** |
| ***Va = 230V*** |
| ***C = 6.3uF*** |
| ***L = 3mH*** |
| ***R = 35Ω*** |

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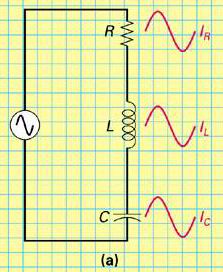
|  |
| --- |
| XL |
| Xc |
| XT –  Draw phasor diagram |
| Z |
| IT |
| VR |
| VL |
| Vc |
| Phase angle |
| Power factor |

|  |
| --- |
| ***f = 50Hz*** |
| ***Va = 240V*** |
| ***C = 2.2uF*** |
| ***L = 2.7H*** |
| ***R = 820Ω*** |

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| --- |
| XL |
| Xc |
| XT –  Draw phasor diagram |
| Z |
| IT |
| VR |
| VL |
| Vc |
| Phase angle |
| Power factor |

|  |
| --- |
| ***f = 1.5kHz*** |
| ***Va =230V*** |
| ***C = 15nF*** |
| ***L = 330mH*** |
| ***R = 3.3kΩ*** |

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| --- |
| XL |
| Xc |
| XT –  Draw phasor diagram |
| Z |
| IT |
| VR |
| VL |
| Vc |
| Phase angle |
| Power factor |