

Electric Circuits II – Assignment

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#	Student ID	Student Name	Grade (10)
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Delivery Date	
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١. يتم تسليم التمرين محلولا في خلال أسبوع من تاريخ التمرين، و يتم حذف درجتين من التمرين عن كل أسبوع تأخير
٢. يتم التسليم لمعيد المقرر مباشرة
٣. تتم أجابه التمرين في نفس ورق الأسئلة



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Q3	<p>Calculate these complex numbers and express your results in rectangular form:</p> <p>(c) $20 + (16\angle -50^\circ)(5 + j12)$</p>
Sol 3	<p>.....</p> <p>.....</p> <p>.....</p> <p>.....</p> <p>.....</p> <p>.....</p> <p>.....</p> <p>.....</p> <p>.....</p> <p>.....</p> <p>.....</p> <p>.....</p> <p>.....</p> <p>.....</p> <p>.....</p> <p>.....</p> <p>.....</p> <p>.....</p> <p>.....</p> <p>.....</p> <p>.....</p> <p>.....</p>



Q4

Evaluate the following complex numbers and leave your results in polar form:

$$(b) \frac{(10\angle 60^\circ)(35\angle -50^\circ)}{(2 + j6) - (5 + j)}$$

Sol 4

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Q5	<p>Find the phasors corresponding to the following signals:</p> <p>((c) $v(t) = 120 \sin(10t - 50^\circ) \text{ V}$</p> <p>((d) $i(t) = -60 \cos(30t + 10^\circ) \text{ mA}$</p>
Sol 5	<p>.....</p> <p>.....</p> <p>.....</p> <p>.....</p> <p>.....</p> <p>.....</p> <p>.....</p> <p>.....</p> <p>.....</p> <p>.....</p> <p>.....</p> <p>.....</p> <p>.....</p> <p>.....</p> <p>.....</p> <p>.....</p> <p>.....</p> <p>.....</p> <p>.....</p> <p>.....</p> <p>.....</p>



Q6	<p>Simplify the following expressions:</p> <p>(c) $\left(\frac{10 + j20}{3 + j4}\right)^2 \sqrt{(10 + j5)(16 - j20)}$</p>
Sol 6	<p>.....</p> <p>.....</p> <p>.....</p> <p>.....</p> <p>.....</p> <p>.....</p> <p>.....</p> <p>.....</p> <p>.....</p> <p>.....</p> <p>.....</p> <p>.....</p> <p>.....</p> <p>.....</p> <p>.....</p> <p>.....</p> <p>.....</p> <p>.....</p> <p>.....</p> <p>.....</p> <p>.....</p> <p>.....</p> <p>.....</p> <p>.....</p> <p>.....</p> <p>.....</p>



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Q7	Two voltages v_1 and v_2 appear in series so that their sum is $v = v_1 + v_2$. If $v_1 = 10 \cos(50t - \pi/3)$ V and $v_2 = 12 \cos(50t + 30^\circ)$ V, find v .
Sol 7	<p>.....</p> <p>.....</p> <p>.....</p> <p>.....</p> <p>.....</p> <p>.....</p> <p>.....</p> <p>.....</p> <p>.....</p> <p>.....</p> <p>.....</p> <p>.....</p> <p>.....</p> <p>.....</p> <p>.....</p> <p>.....</p> <p>.....</p> <p>.....</p> <p>.....</p> <p>.....</p> <p>.....</p> <p>.....</p> <p>.....</p> <p>.....</p> <p>.....</p>

