# Electric Circuits II – Assignment 04

| # | Student ID | Student Name | Grade (10) |
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| Delivery Date | |

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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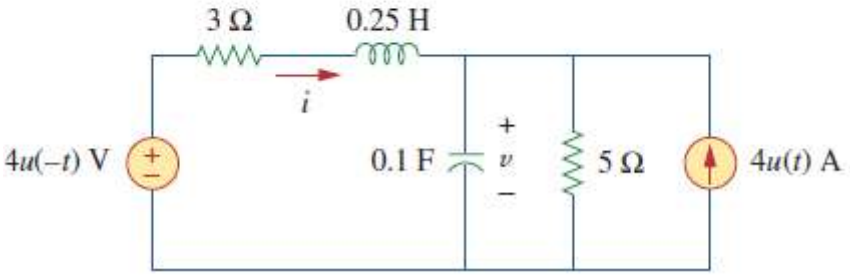
| Q1 | In the circuit of Fig. , find:<br>(a) $v(0^+)$ and $i(0^+)$,<br>(b) $dv(0^+)/dt$ and $di(0^+)/dt$,<br>(c) $v(\infty)$ and $i(\infty)$.<br>  <br> |
| Sol 1 | ..... |

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| Q2 | The current in an *RLC* circuit is described by $$\frac{d^2i}{dt^2} + 10\frac{di}{dt} + 25i = 0$$ If $i(0) = 10$ A and $di(0)/dt = 0$, find $i(t)$ for $t > 0$. |
| Sol 2 | ..... |

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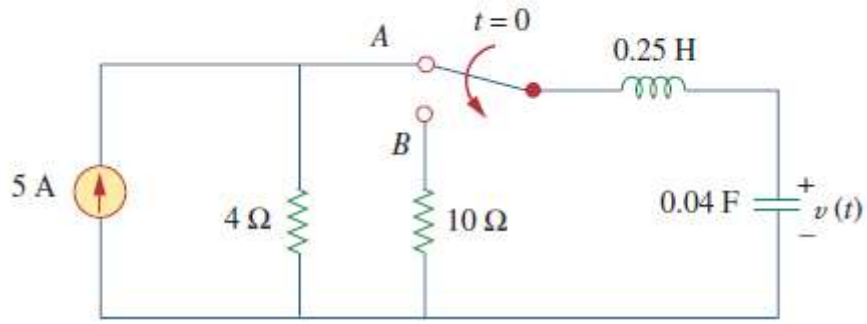
| Q3 | In the circuit of Fig. , the switch instantaneously moves from position $A$ to $B$ at $t = 0$. Find $v(t)$ for all $t \geq 0$.   |
| Sol 3 | ..... |

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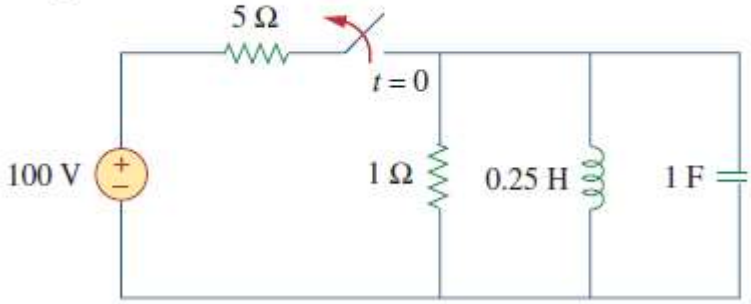
| Q4 | Find the voltage across the capacitor as a function of time for $t > 0$ for the circuit in Fig. . Assume steady-state conditions exist at $t = 0^-$.   |
| Sol 4 | ..... |