

國立虎尾科技大學 108 學年度第 2 學期博士班資格考試題

系別：動力機械工程系機械與機電工程博士班

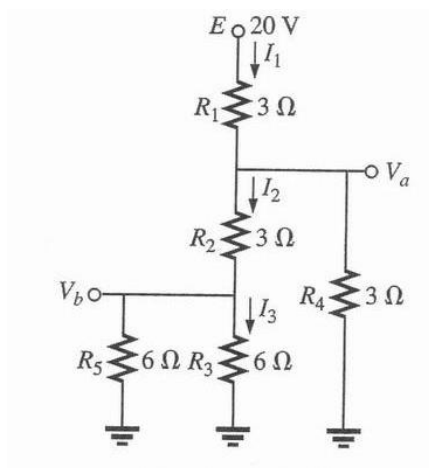
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科目：電路學

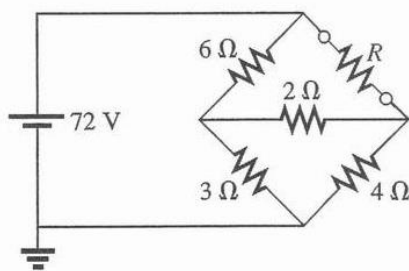
注意事項：

- (1) 本試題共有 11 題，任選 10 題作答，每題 10 分，合計一百分。
- (2) 請依序作答於答案卷上並註明題號，若未註明選答題號及超過規定題數時，謹採計作答順序較前之題目計分。
- (3) 可使用計算機 close book

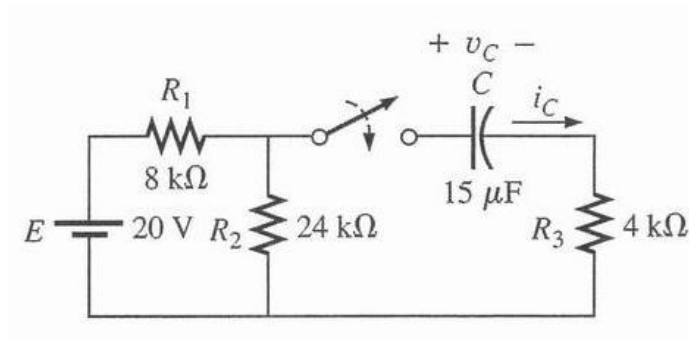
1. Find I_1 , I_2 , I_3 , V_a , V_b



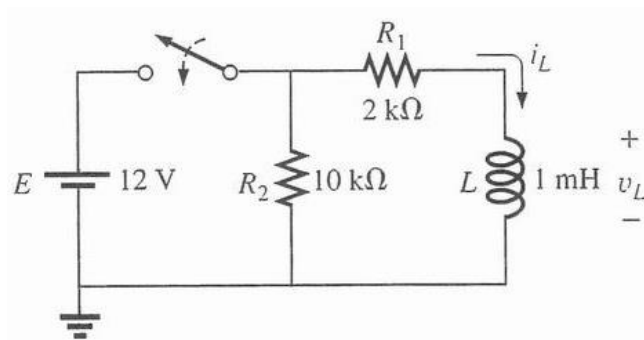
2. Find the current through R If $R=5\Omega$



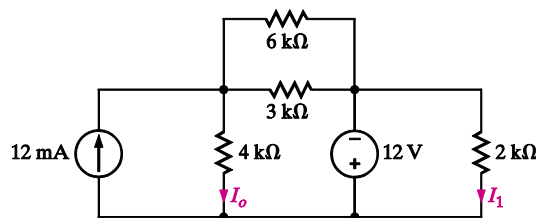
3. Find the mathematical expressions for the transient behavior of the v_c and i_c following the closed of the switch..



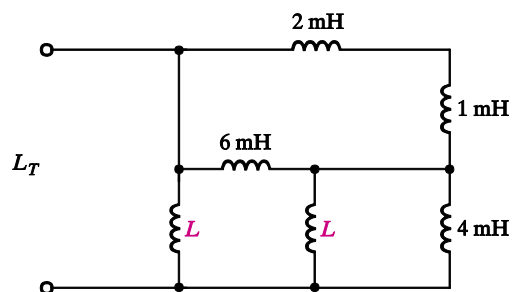
4. a. Determine the time constant.
 b. Write the mathematical expressions for the v_L and i_L when the switch is closed.



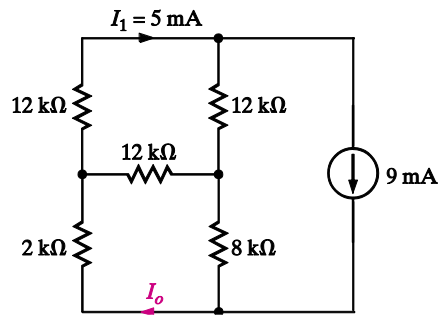
5. Find I_o and I_1



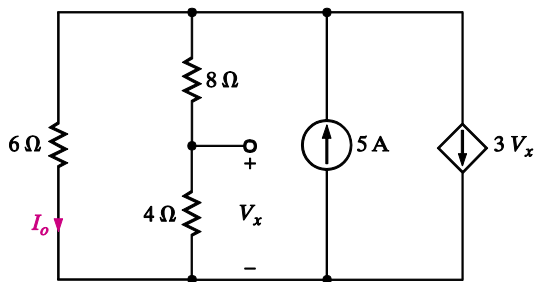
6. Find L if $L_T = 2\text{ mH}$



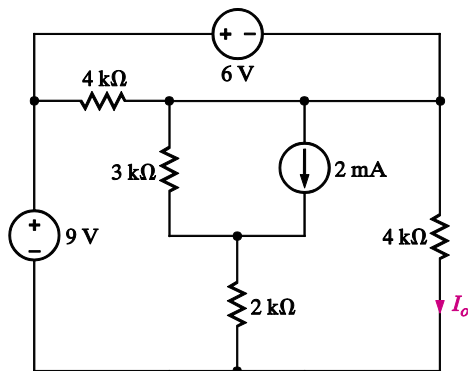
7. Find I_o



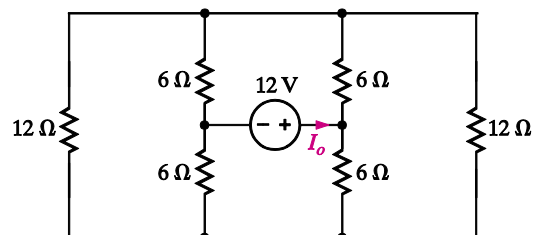
8. Find I_o



9. Find I_o



10. Find I_o



11. Find V_o

