ENGG104 Tutorial **4** extra **Problems** (revision)

Name_____   Student Number_____

TRUE/FALSE. Write 'T' if the statement is true and 'F' if the statement is false.

1) A Megohmmeter is an instrument for measuring very high resistance levels.   1) _____

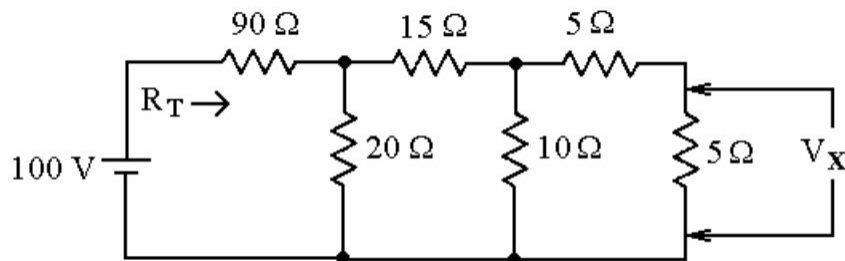**SHORT ANSWER. Write the word or phrase that best completes each statement or answers the question.**

Figure 7.5

2) See Figure 7.5. Calculate V_X.   2) _____

3) See Figure 7.5. Calculate the current through the 20 Ω resistor.   3) _____

MULTIPLE CHOICE. Choose the one alternative that best completes the statement or answers the question.

4) See Figure 7.5. What is the voltage dropped across the 90 Ω resistor?   4) _____
   A) 90.0 V   B) 18.2 V   C) 81.8 V   D) 100.0 V

SHORT ANSWER. Write the word or phrase that best completes each statement or answers the question.
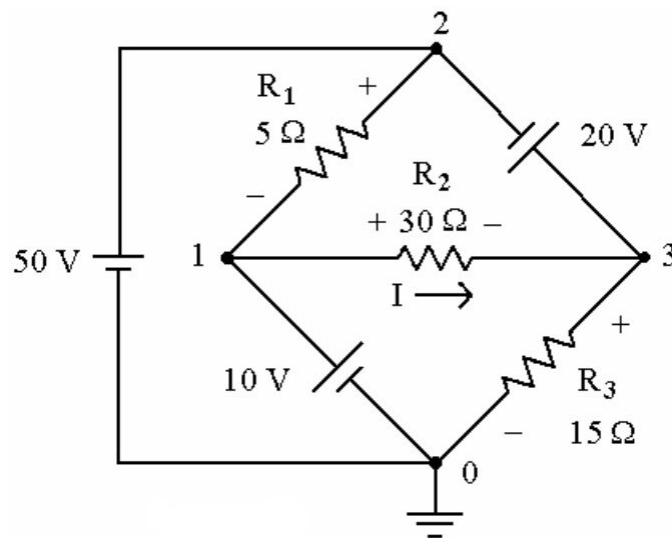

Figure 7.7

5) See Figure 7.7. Determine the current flowing through the 5 ohm resistor.   5) _____

1

6) See Figure 7.7. Determine the power dissipated across the 15 ohm resistor.   6) _____

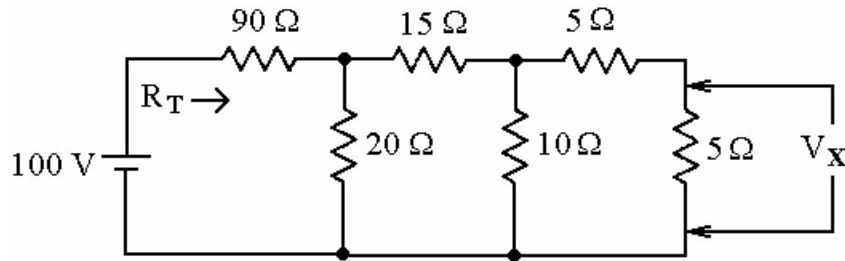**MULTIPLE CHOICE. Choose the one alternative that best completes the statement or answers the question.**

Figure 7.5

7) See Figure 7.5. What is the value of R_T?   7) _____
    A) 120 Ω   B) 145 Ω   C) 100 Ω   D) 110 Ω

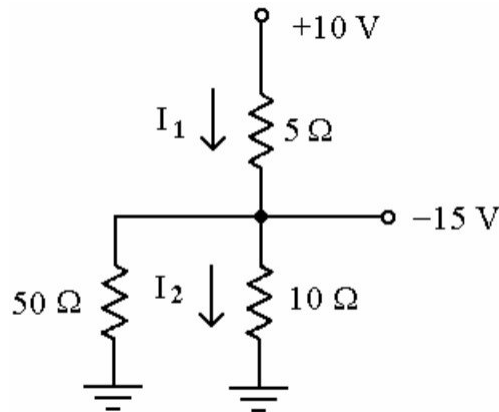**Figure 7.6**

8) See Figure 7.6. What is the power dissipated across the 10 ohm resistor?   8) _____
    A) 22.5 watts   B) 225 watts   C) 2.25 watts   D) 0.225 watts
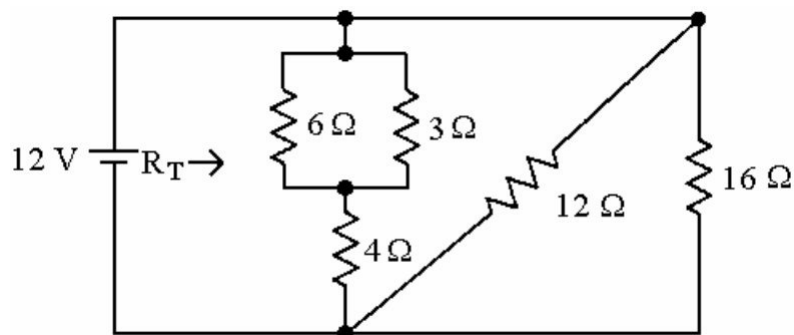

Figure 7.1

9) See Figure 7.1. What is the total resistance R_T?   9) _____
    A) 6.4 Ω   B) 4.8 Ω   C) 2.4 Ω   D) 3.2 Ω

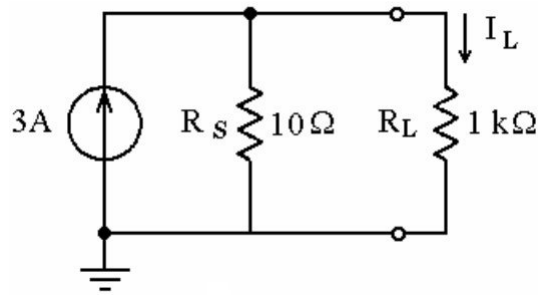**Figure 8.1**

10) See Figure 8.1. What is I_L?   10) _____
     A) 297.0 mA   B) 2.97 mA   C) 2.97 A   D) 29.7 mA

SHORT ANSWER. Write the word or phrase that best completes each statement or answers the question.

11) See Figure 8.1. How much power is produced by the current source?   11) _____

12) The method of Nodal Analysis involves the use of what law?   12) _____

TRUE/FALSE. Write 'T' if the statement is true and 'F' if the statement is false.

13) An ideal current source has a 0 Ω resistance in parallel with it.   13) _____

14) Source conversions are equivalent only at their external terminals.   14) _____

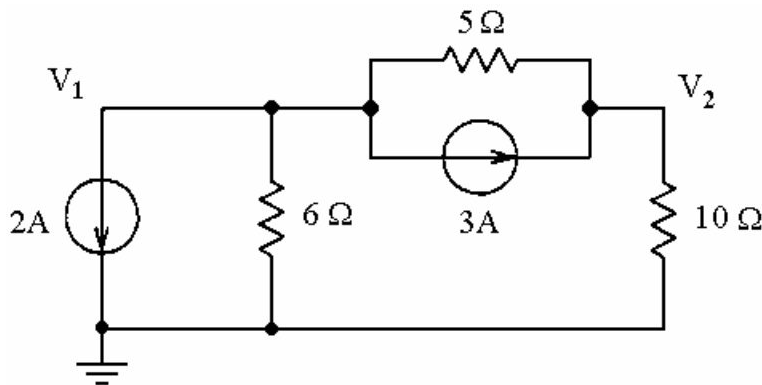**SHORT ANSWER. Write the word or phrase that best completes each statement or answers the question.**

Figure 8.7

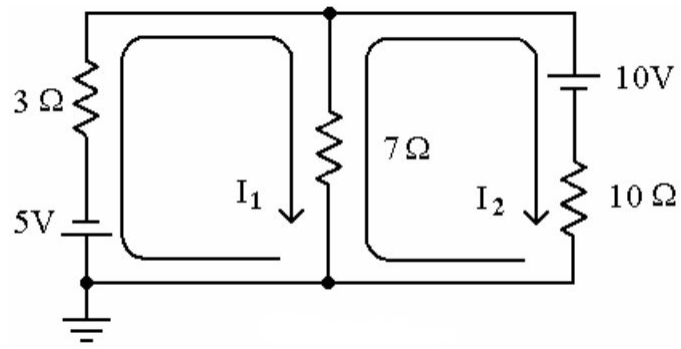15) See Figure 8.7. Use nodal analysis to solve for voltages V_1 and V_2.   15) _____

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Figure 8.5

16) See Figure 8.5. Compute the voltages across the 3 Ω, 7 Ω, and 10 Ω resistors.
Use Nodal analysis

16) _____