EE 221 EXAM #1 - 9 September 2005

Name: _____

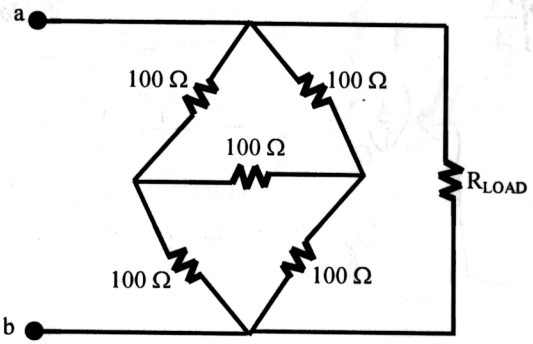
Section: _____

NOTICE:

1. **Detach these last two (2) pages and take them with you. Write your name and section above.**
2. **Set aside 1 hour in privacy to complete this section using Multisim.**
3. **You may not discuss the problems with anyone until after you turn in this sheet with the answers to your professor on Monday, 12 September.**
4. **Complete this sheet by filling in the answers and signing the certification at the bottom of the last page.**

III. PART 3
Multisim Problems

22. (2 pts) The input resistance for the circuit below is measured by placing an ohmmeter across the terminals a to b. The bridge network of 100 Ω resistors is being used so that the input resistance is exactly 50 Ω. Use Multisim to find the value of the resistor R_{LOAD} so that the input resistance is 50 Ω.

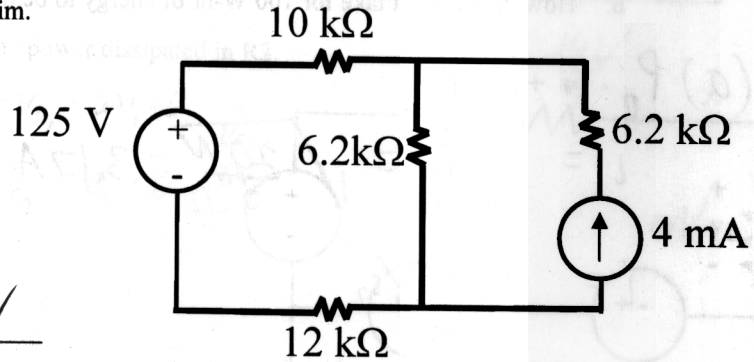


the bridge resistance is 100 Ω. Put this in parallel with R_{LOAD} = 100 Ω to get a 50 Ω input resistance

R_{LOAD} = 100 Ω

23. (8 pts) Construct the circuit below in Multisim.

a. Measure the voltage across the 10 kΩ resistor.



V_{10K} = 35.532 V