EECT 111 Mid-Term

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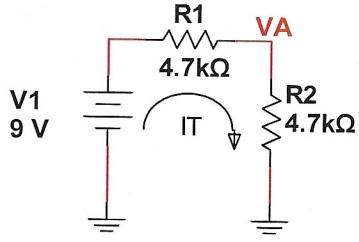
Score _____ Instructor (Mr. Bell) Lab Partner's Name Tung Doan

The following questions should be should be answered in three ways: either using your calculator or Excel, simulation using MultiSim and test using Elvis II. You can use back of test to show work!

1. Find the following:



Find IT, RT and VA via *analysis* (show all work, can also use Excel)

RT = 9400 Ω

IT = 957.4E-6

VA = 4.5

Find IT, RT and VA via *simulation* (capture and upload simulation schematic and outputs)

RT = 9.413 KΩ

IT = 957E-6

VA = 4.5 V

Find IT, RT and VA via *test* (capture your test setup and measure all resistors, VA and IT).

R1 = 4.624

R2 = 4.656

RT = 9.282

IT = 0.9720

VA = 4.5332

1/1/45

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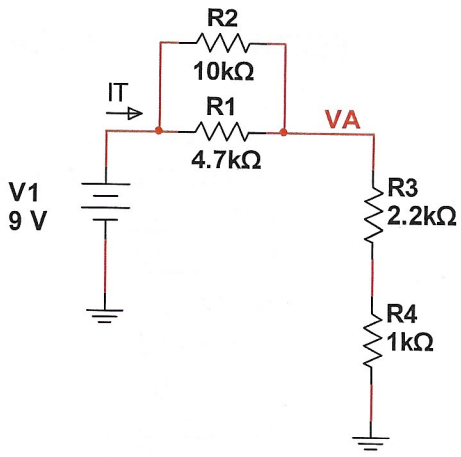

3. Find the following:

Find IT, R12, R34, RT and VA via *analysis* (show all work, can also use Excel)

R12 = 3197.279

R34 = 3200

RT = 6397.279

IT = 1.41 mA

VA = 4.50V

Find R12, R34, RT, IT and VA via *simulation* (capture and upload simulation schematic and outputs)

R12 = 3197.279

R34 = 3200

RT = 6.411K

IT = 1.41mA

VA = 4.50

Find IT, RT and VA via *test* (capture your test setup and measure all resistors, VA and IT).

RT = 6.373K

R1 = 4.623K

R2 = 10.090K

R3 = 2.199K

R4 = 1.607K

IT = 1.4075D

VA = 4.978V

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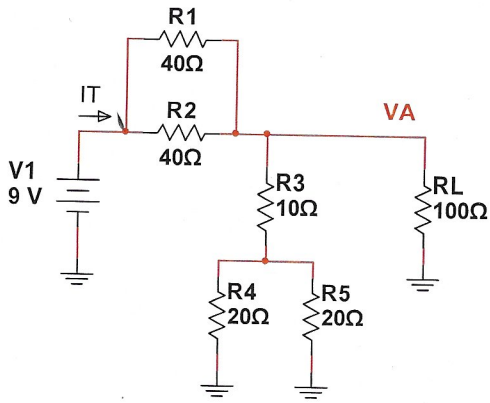
5. Find the following :

Find R_{TH}, V_{TH} and RL for maximum power transfer via analysis (show all work.) Create a plot in Excel for the power transfer.



R_{TH} = 4

V_{TH} = 4.5 V

RL = 100

V1·20/

9·20/20+10+10

Find R_{TH}, V_{TH} and RL for maximum power transfer via simulation (capture and upload simulation schematic and outputs).

R_{TH} = _____

V_{TH} = _____

RL = _____