

Name _____

EE/EET 2240-01

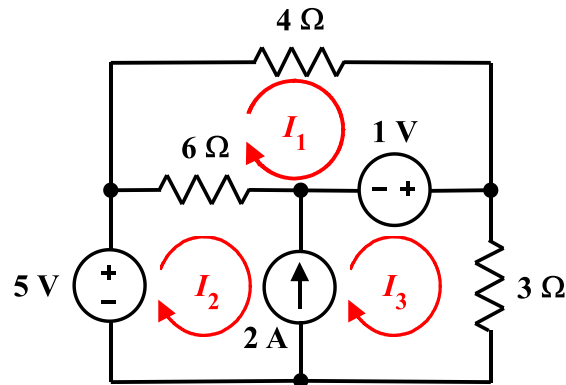
Exam #2

Friday, June 8, 2018

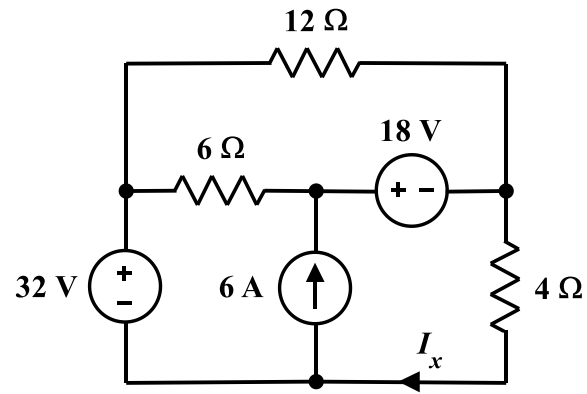
LIBR B-32, 8:00AM – 9:15AM

[closed book – one two-sided 8½”×11” page of notes and calculator allowed, nothing else]

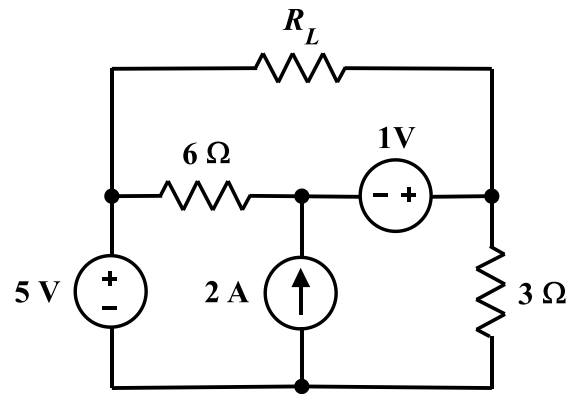
1. [Mesh Analysis] Use the *mesh analysis* method, and the corresponding rules (no substitutions or simplifications) discussed in class, to formulate a system of simultaneous linear equations representing the circuit shown. Express the equations in the matrix form discussed in class. Note that mesh currents are pre-assigned. ***Do not attempt to solve the equations.***



2. [Superposition] Use the *superposition* method to determine the value of I_x .



3. [Thévenin/Norton, Maximum Power, Source Transformation] What value should be chosen for the load resistor, R_L , so that it will absorb maximum power from the rest of the circuit?
How much power will it absorb?



4. [Operational Amplifiers] Assuming the operational amplifier is *ideal*, determine the value of the output current, I_{out} .

