# Lebanese American University

*Faculty of Engineering and Architecture*

*Electrical and Computer Engineering Department*

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**Course: ELE 201 Electrical Circuits I**

# Exam 1

**Monday 4 December, 2006**

**NAME:**

**ID:**

**Time: 60 min**

**Exam Rules**

No cell-phones.

No graphical or programmable calculators.

**Honor Code**

All homework assignments and exams should be done on an individual basis unless explicitly stated otherwise by the instructor. Cheating is a very serious offense and will not be tolerated. The University policy concerning cheating is as follows:

"Students caught cheating on an exam receive a grade of zero on the exam in their first cheating attempt in the course and receive a warning. Students caught cheating for the second time in the same course receive a grade of F in the course and a second warning. A grade of zero on an exam resulting from cheating must be counted in the student's course grade. The zero cannot be dropped in computing the final grade in case the instructor has a policy of allowing students to drop their worst exam grade."

**In addition:** A repeated offense in either the HW's or the quizzes will be punished by getting an F on ALL HW's or quizzes respectively.

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*Any* similarity in a homework or quiz will be considered a cheating attempt.

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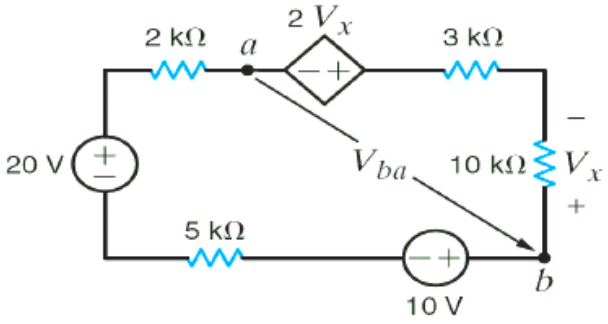
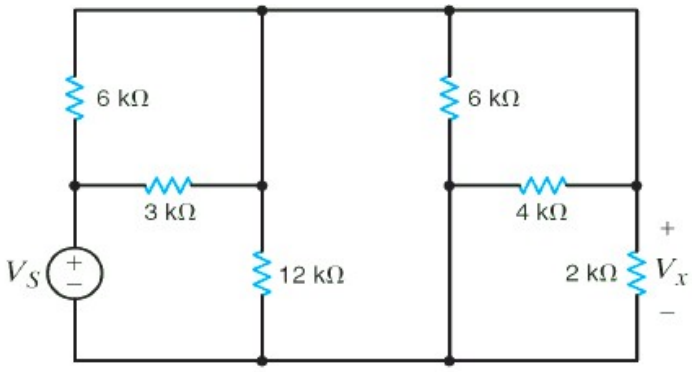
**Problem 1 (15 points)**

The 10-V source absorbs 2.5mW of power. Calculate $V_{ba}$ and the power absorbed by the dependent voltage source.



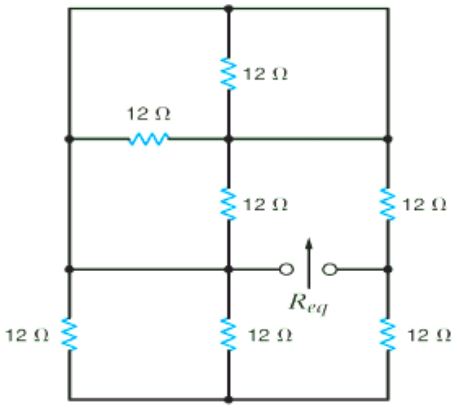
**Problem 2 (15 points)**

In the following circuit, $V_x$=12V. Find $V_s$



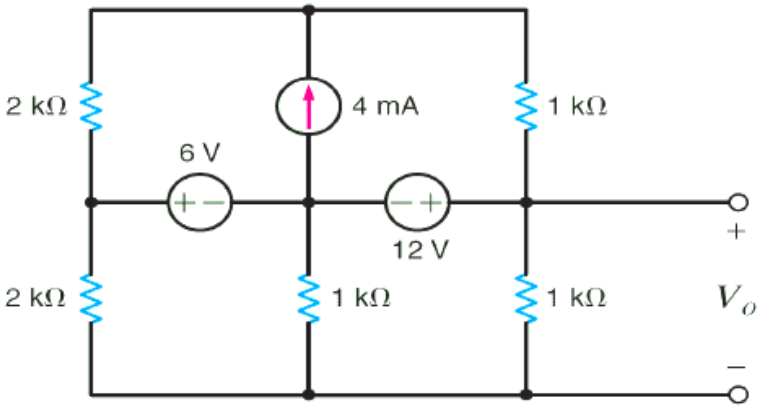
**Problem 3 (15 points)**

Find $R_{eq}$



**Problem 4 (20 points)**

Determine $V_0$ in the following network using nodal analysis.



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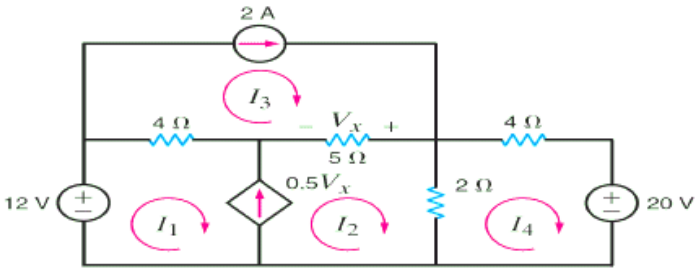
**Problem 5 (20 points)**

Solve for $V_x$ using the provided mesh currents



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**Problem 6 (15 points)**

Find $V_0$