Name: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ (please print)

Signature: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

ECE 2202 – Midsemester Exam

July 21, 2022

Keep this exam closed and face up until you are told to begin.

1. This exam is closed book, closed notes. You may have a crib sheet in the form of one 8 ½” x 11” piece of paper written on both sides. Print your name, and provide your signature above.

2. Show all work on these pages. Show all work necessary to complete the problem. A solution without the appropriate work shown will receive no credit. A solution which is not given in a reasonable order will lose credit.

3. Show all units in solutions, intermediate results, and figures. Units in the exam will be included between square brackets.

4. If the grader has difficulty following your work because it is messy or disorganized, you will lose credit.

5. Do not use red ink. Do not use red pencil.

6. You will have 105 minutes to work on this exam.

1. \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_/35

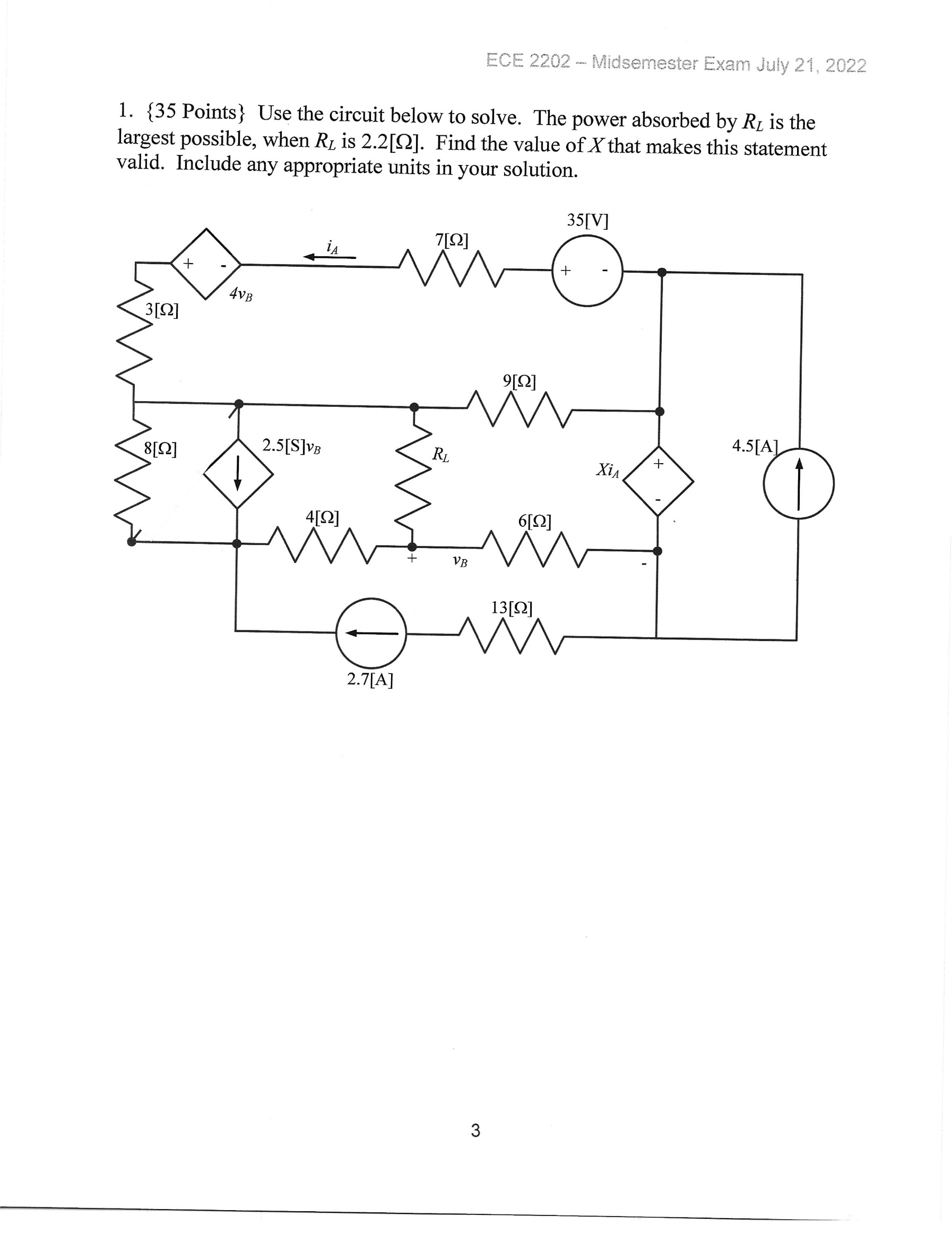
2. \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_/30

3. \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_/35

Total = 100

Room for extra work

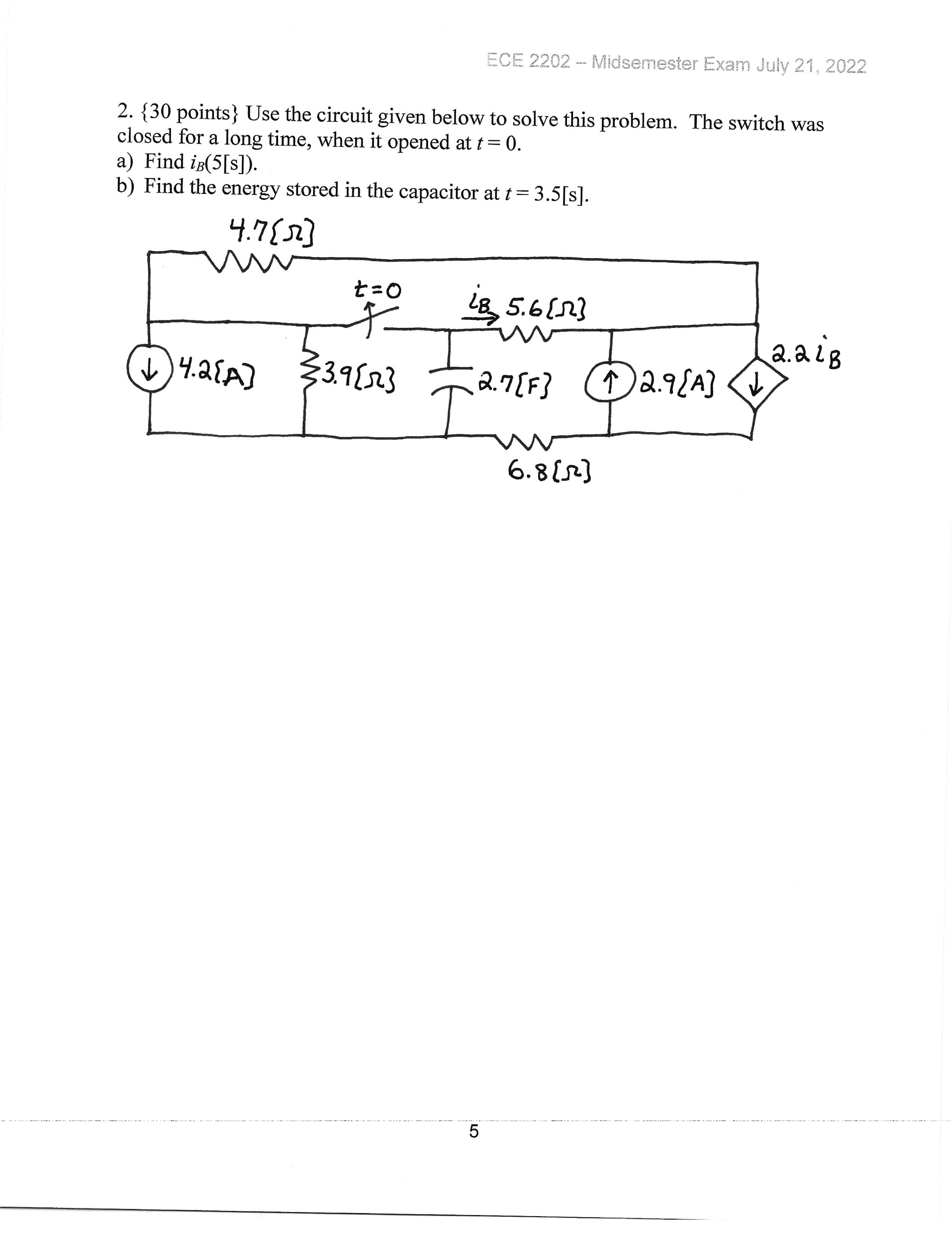
1. {35 Points} Use the circuit below to solve. The power absorbed by *RL* is the largest possible, when *RL* is 2.2[]. Find the value of *X* that makes this statement valid. Include any appropriate units in your solution.



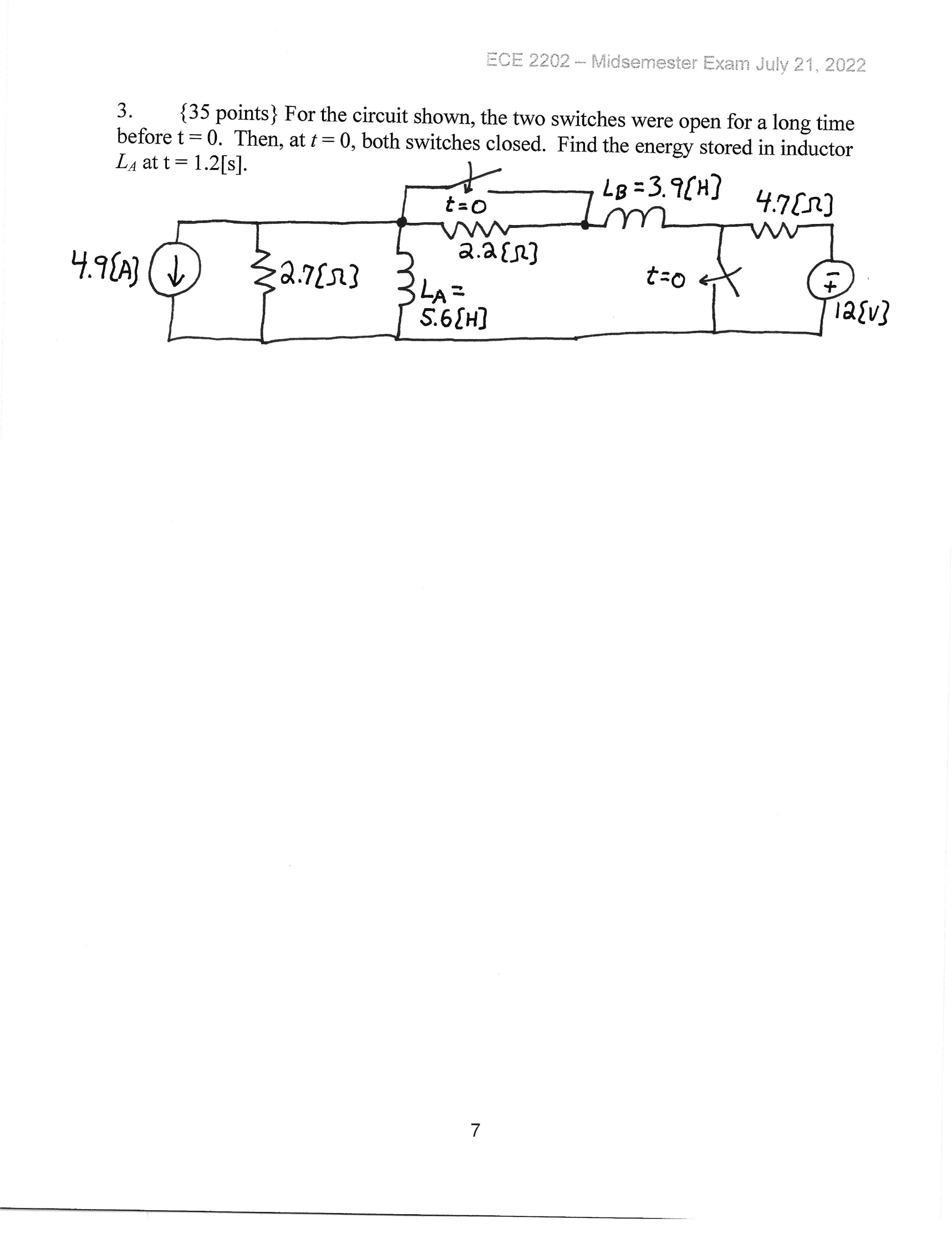
Room for extra work

2. {30 points} Use the circuit given below to solve this problem. The switch was closed for a long time, when it opened at *t* = 0.

1. Find *iB*(5[s]).
2. Find the energy stored in the capacitor at *t* = 3.5[s].



Room for extra work



Room for extra work

