

**Instructor:**

Asst. Prof. Onur Kurt

**Student Name:**

**ID:**

**Date:**

**ITU**

**EEF 211E: Basics of Electrical Circuits (Fall 2022)**

**Homework #2**

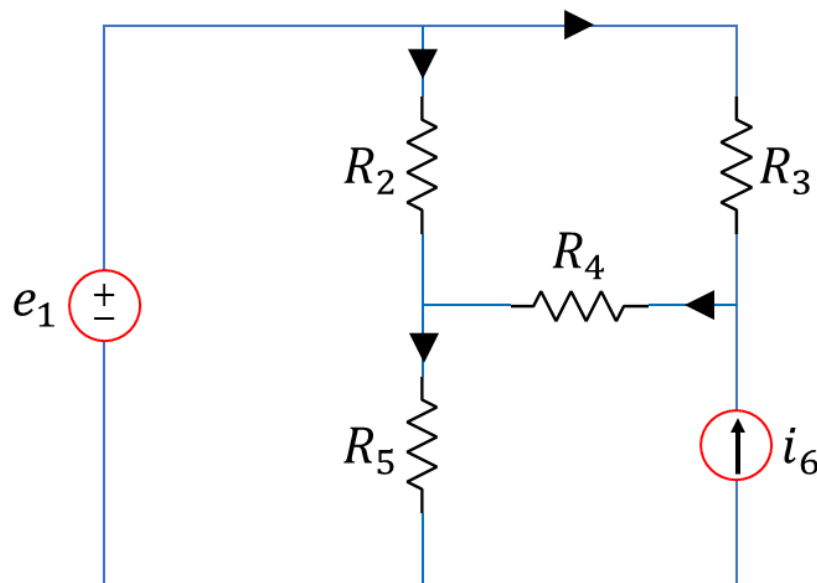
**Grading Policy:**

- You must submit your homework assignment to the course teaching assistant (TA) before its due date. Late homework will not be accepted/graded.
- Homework should be written clearly and legibly. Your answers should show step-by-step solution of each question. Messy and illegible homework may not be graded.
- You must not ask for answers directly from any aide.
- Academic dishonesty is unacceptable. Plagiarism and cheating on the homework assignment will result in a zero grade.

**Question 1-)** For the circuit shown below;

**a-)** Obtain the equations to analyze the circuit using chord current method such that unknown variables are  $i_2$  and  $i_3$ .

**b-)** Obtain the equations to analyze the circuit using branch voltage method such that unknown variables are  $V_4$  and  $V_5$ .



**Question 2-** Write the state equations for the circuit given in the figure below. Note: For the circuit shown below, pick (draw) a proper tree where  $R_1$  and  $R_3$  will be part of the tree.

