

**Instructor:**

Asst. Prof. Onur Kurt

**Student Name:**

**ID:**

**Date:**

**ITU**

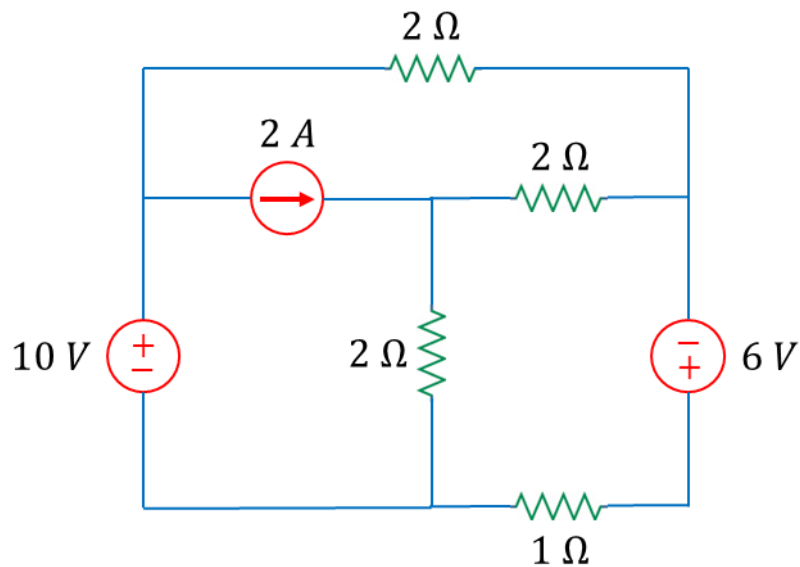
**EHB 211E: Basics of Electrical Circuits (Fall 2020)**

**Homework 2**

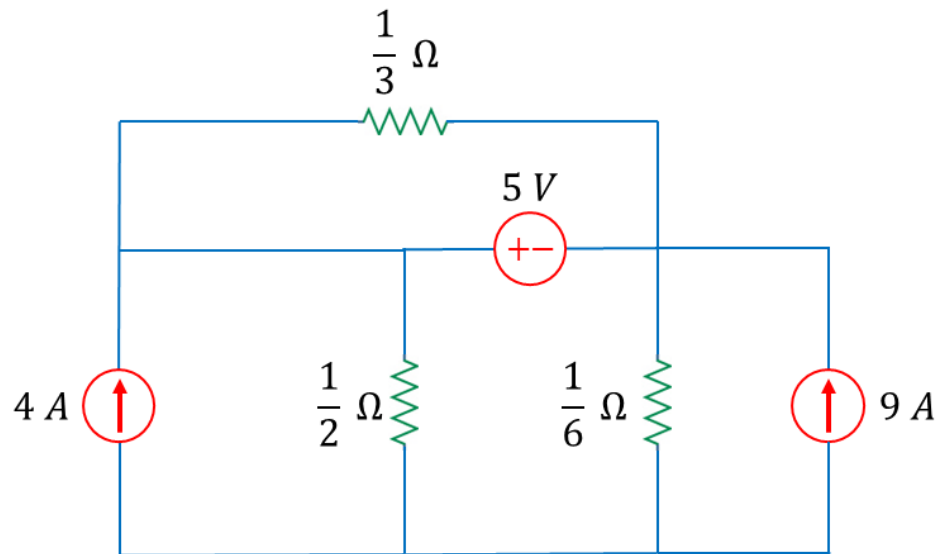
**Grading Policy:**

- You must upload your homework assignment to Ninova 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.

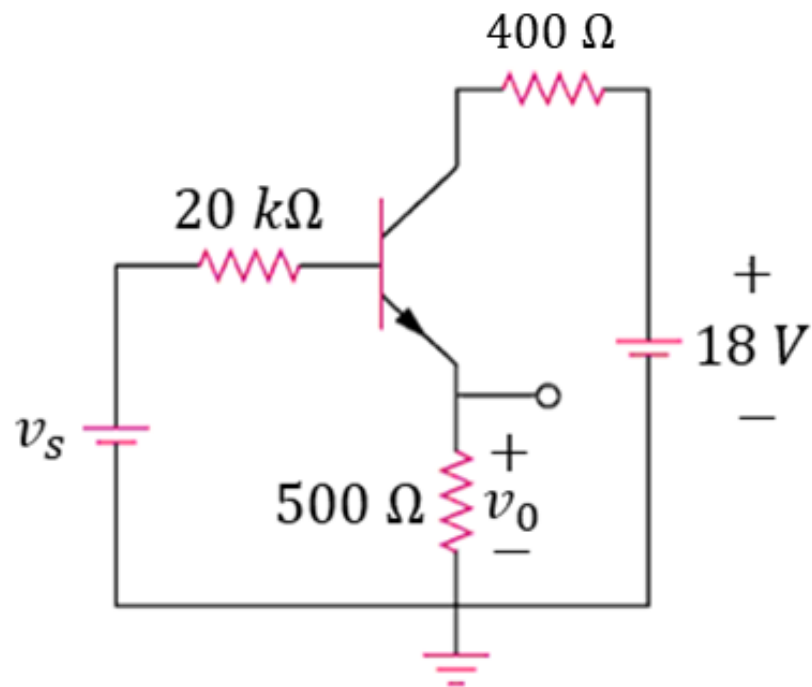
**Question 1-)** Determine the current through and the power dissipated in  $1\text{-}\Omega$  resistor in the circuit shown below using mesh analysis.



**Question 2-**) Use nodal analysis to determine the voltage across each current source in the circuit shown below.



**Question 3-** For the BJT circuit shown below,  $V_0 = 6\text{ V}$ ,  $\beta = 200$  and  $V_{BE} = 0.7\text{ V}$ . Determine  $V_S$ .



**Question 4-** For the circuit shown below, find the nodal voltage  $v_1$  through  $v_4$  using PSpice.

