Shahjalal University of Science and Technology
Department of Computer Science and Engineering
1st year 1st Semester Final Examination—June 2020 (Session 2019-20)
Course No.—**EEE 109D**
Course Title—**Electrical Circuits**

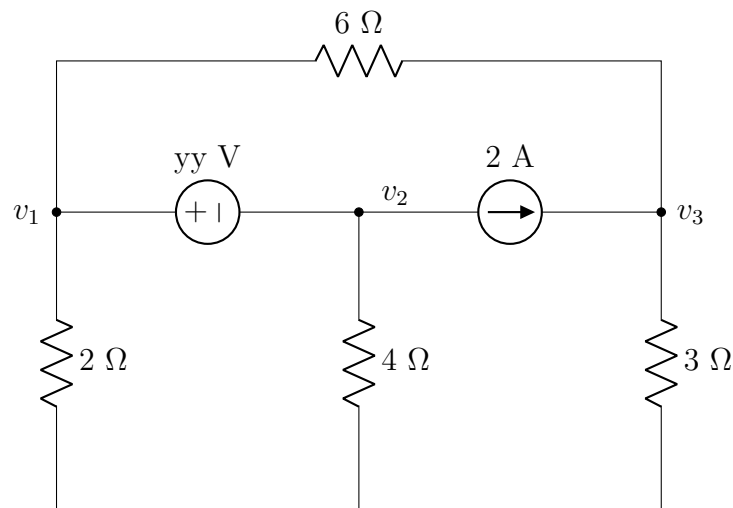Time—**5 Hours**   Credit: **3.00**   Total Marks#**30**

(Answer All the Questions)
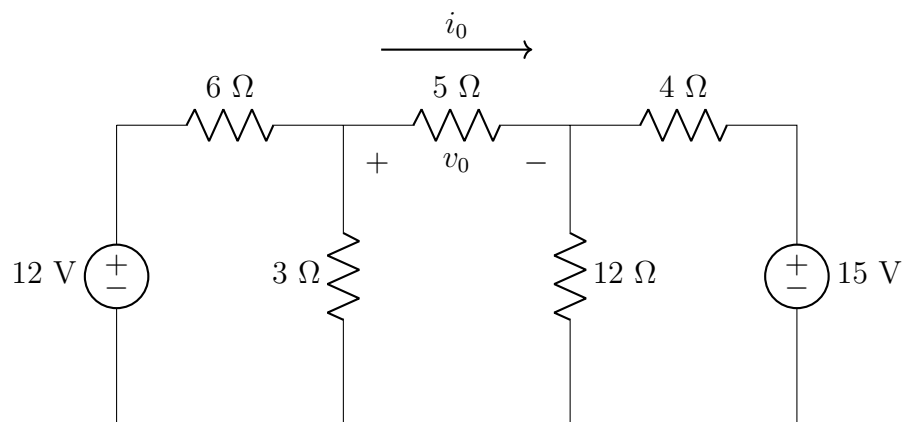
Group A

1. Use **supernodes** to obtain v_1, v_2, v_3 in the following circuit. Here, **yy = last two digits of your registration number.**   7.5

2. Use the **superposition principle** to find i_0 and v_0 in the following circuit.   7.5
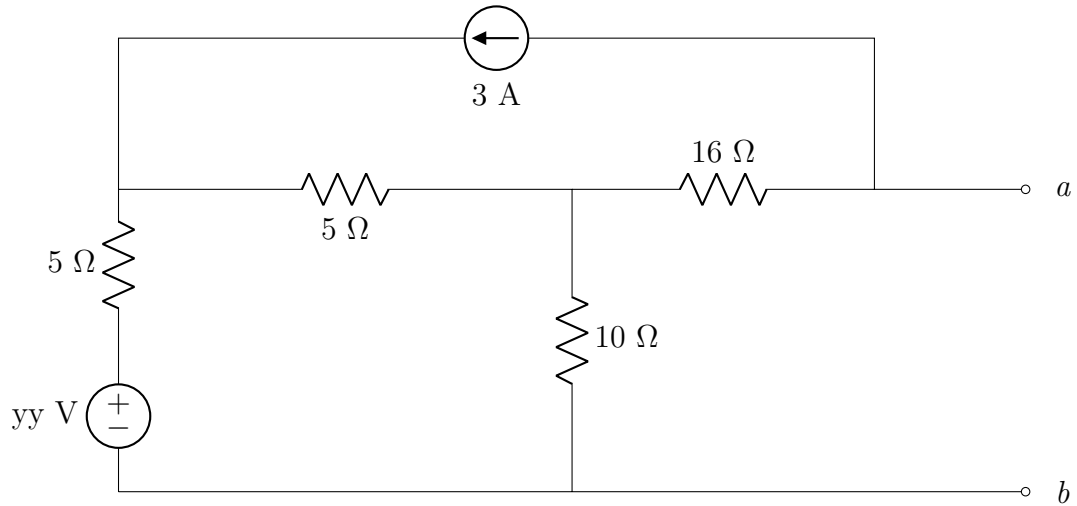
Group B

1. Obtain the **Thevenin equivalent** at terminals **a-b** of the following circuit. Here, **yy = last two digits of your registration number.**   7.5

2. The switch in the following circuit has been closed for a long time and it is opened at $t = 0$. Find v_t for $t \geq 0$. Calculate the **initial energy** stored in the capacitor. Here, **yy = last two digits of your registration number.**   7.5