Instructor:

Asst. Prof. Onur Kurt

Student Name:

**ID:**

Date:

ITU

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

Homework 4

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.
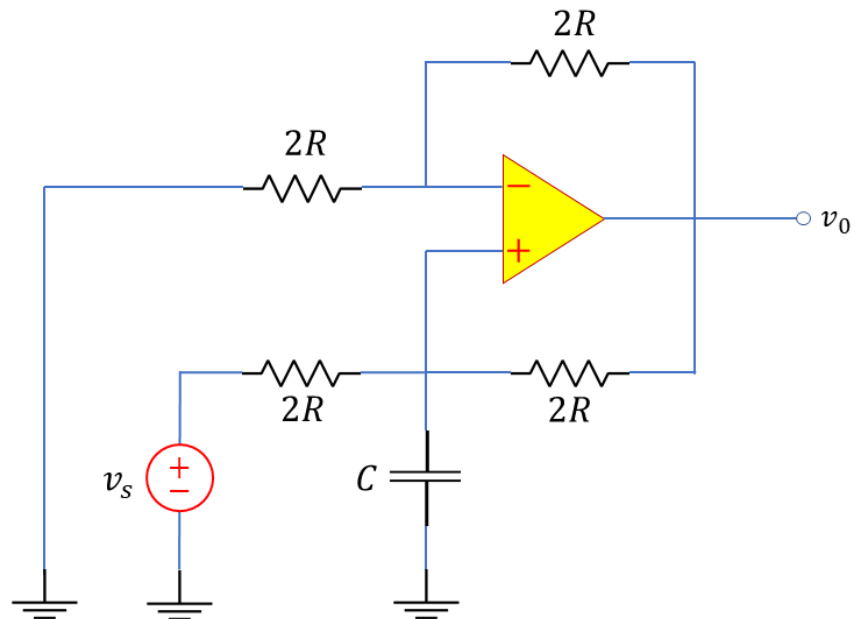
Question 1-) For the circuit shown below, find the voltages V_1 and V_2 across the capacitors under dc conditions.
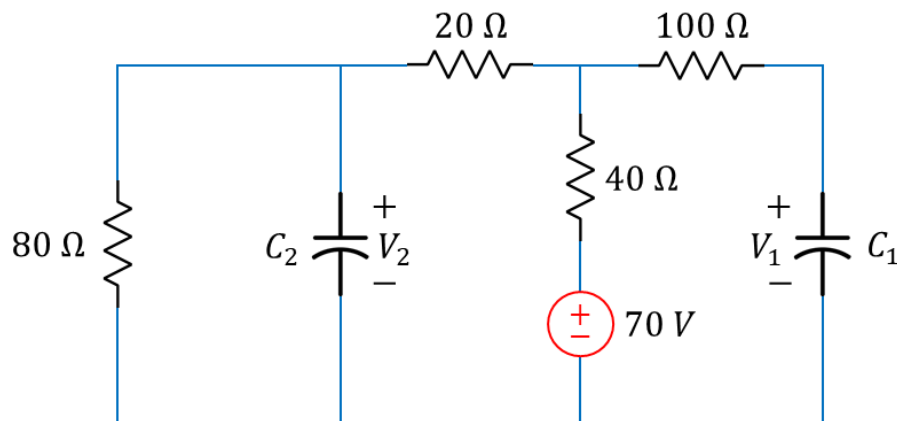
Question 2-) For the circuit shown below, determine the value of R that will make the energy stored in the capacitor the same as that stored in the inductor under dc conditions.
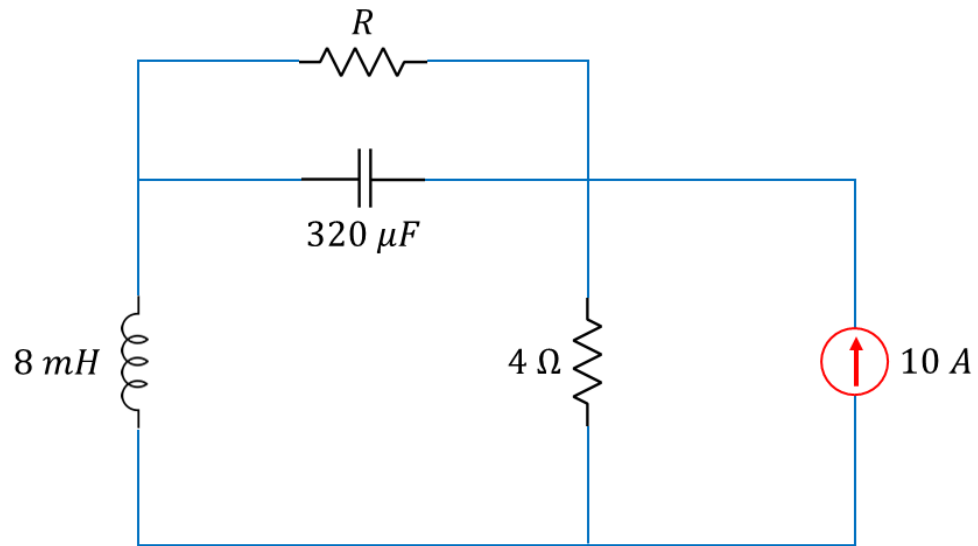
Question 3-) Show that the circuit shown below is a noninverting integrator.

Question 4-) The waveform of the output voltage v_0 is given for the amplifier circuit shown below. Determine and plot the waveform of the input voltage for the circuit shown below.

0.5 MΩ

2 μF

0.5 MΩ

v_s

v_0

v_0 (V)

8

1   2   3   4

t (s)

−8