

Homework #9

Deadline: 2010/06/14 (Monday)

Reading: Chapter 9 (Sections 9.1 through 9.4)

Problems:

- (1) The voltage across a $50 \mu\text{F}$ capacitor is shown in Figure 1. Determine the current waveform.

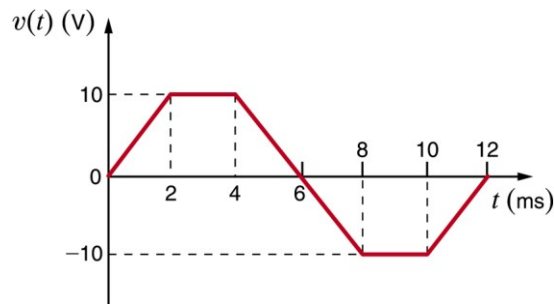


Figure 1.

- (2) The voltage across a 4 H inductor is given by the waveform shown in Figure 2. Find the waveform for the current in the inductor.

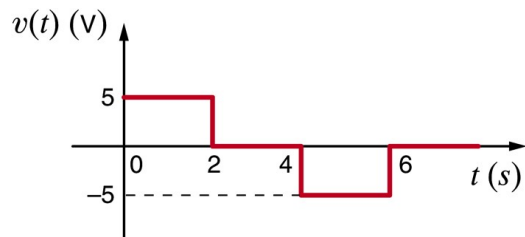


Figure 2.

- (3) Compute the equivalent capacitance of the circuit in Figure 3 if all the capacitors are $4 \mu\text{F}$.

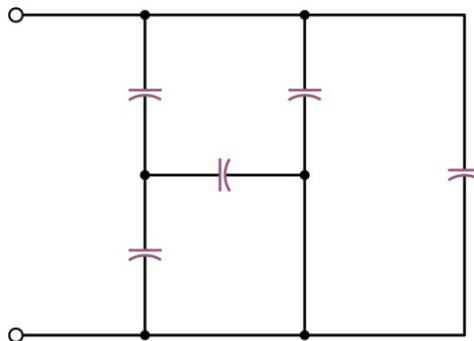


Figure 3.

(4) Select the value of C to produce the desired total capacitance of $C_T = 10 \mu\text{F}$ in the circuit in Figure 4.

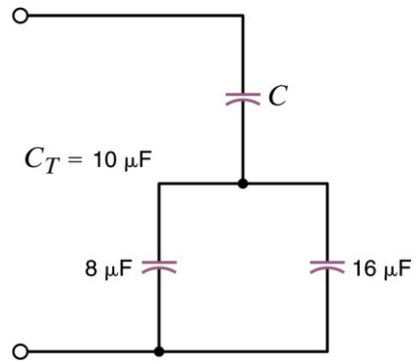


Figure 4.

(5) Find the value of L in the circuit in Figure 5 so that the total inductance L_T will be 2.25 mH .

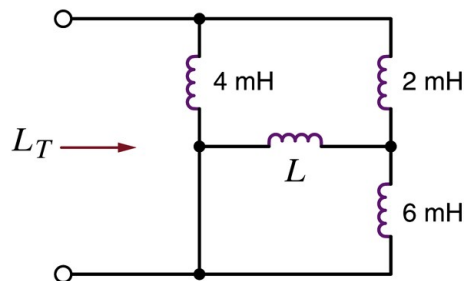


Figure 5.

Notice:

- 超過一週以內(含一週)遲交：此作業分數乘以 0.7。
- 超過一週以上遲交：此作業分數乘以 0。
- 此作業不需要用電腦打字，但是字跡要工整。
- 請用 A4 尺寸的紙（非活頁紙）。
- 作業完成之後請務必上傳至 <https://portal.yzu.edu.tw>，否則作業遺失以零分計算。