EE 362: Signals and Systems Name:----------

Spring 2019
Homework #9 (Due: Tuesday, April 2, 2019)

- Circle or box your answer (don't forget units).
- **Show** your steps.
- Use 8.5" x 11" paper, and trim off any ragged edges.
- **Staple** your work together and write your name neatly.

1. For the circuit shown in Figure 1, find $y(t)$ if the input is [7 points]

$$x(t) = 5 + 7\cos(10\,t) + 7\sin(1000t)$$

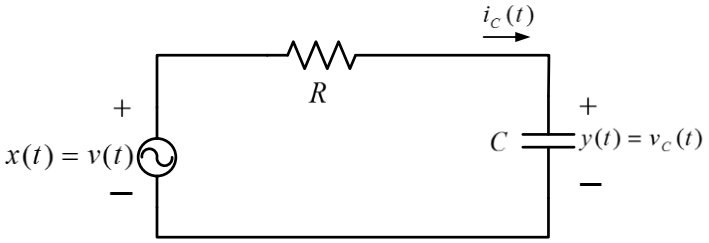


Figure 1

2. Repeat problem 1 if the input is a pulse train as shown in Figure 2 [8 points]

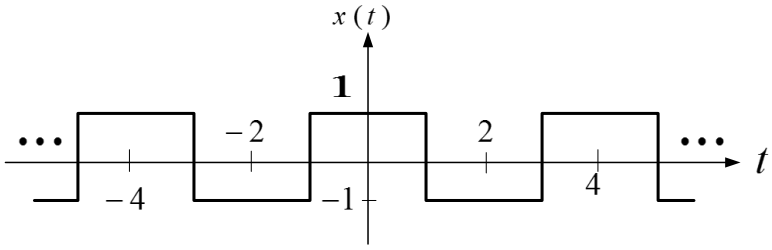


Figure 2

3. Repeat problem 1 if the output $y(t)$ is the voltage across the resistor instead of across the capacitor. [7 points]