

EE 2920

Dr. Johnson

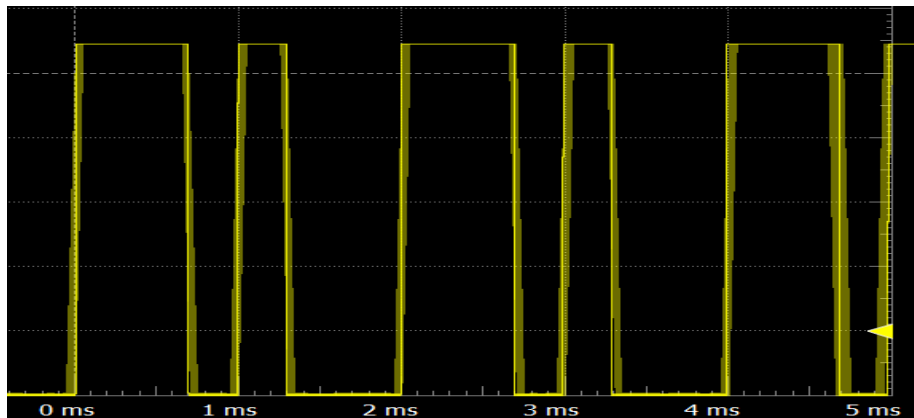
Homework 10

Use interrupts with Timer32 to create a 1Kz waveform on Pin 24 that alternates between 30% and 70% duty cycle every other period. Assume Mclk = 3MHz

hint – use background load

1) Calculate the required # of clocks for the waveform

10pts



Use interrupts with Timer32 to create a 1Kz waveform on Pin 24 that alternates between 30% and 70% duty cycle every other period. Assume Mclk = 3MHz

hint – use background load

2) Write a function to setup timer32 (including interrupts)

20pts

~ 11 lines of code

Use interrupts with Timer32 to create a 1Kz waveform on Pin 24 that alternates between 30% and 70% duty cycle every other period. Assume Mclk = 3MHz

hint – use background load

3) Write an ISR to create the waveform

20pts

~ 18 lines of code

Use interrupts with Timer32 to create a 1Kz waveform on Pin 24 that alternates between 30% and 70% duty cycle every other period. Assume Mclk = 3MHz

hint – use background load

4) Complete the program and measure the output waveform

50pts

~ 9 lines of additional code