# Fall 2018 - Quiz 3 <br> ECE 301: Signals and Systems 

Prof.Aly El Gamal

## Problem 1

For the continuous time periodic signal $x(t)$ with fundamental period $T$ as shown in figure 1, calculate the Fourier series coefficients when
a $T=6 T_{1}$
b $T=2 T_{1}$. Explain the observed Fourier coefficients for this case


Figure 1

## Problem 2

If the Fourier series coefficients of a continuous time periodic signal $x(t)$ are given by $a_{k}$. Find the Fourier series coefficients of $x^{*}(t)$, the complex conjugate of $x(t)$.

