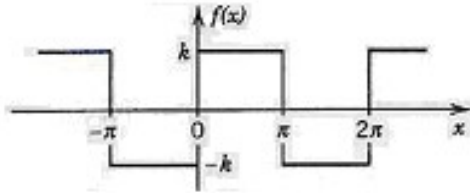# EE202 Numerical Methods for Engineers
Laboratory Assignment: 5

** Find solutions of the following questions in Matlab:

Question 1:

Find the Fourier coefficients of the following periodic square wave.

$$f(x) = \begin{cases} -k & \text{if} & -\pi < x < 0 \\ k & \text{if} & 0 < x < \pi \end{cases} \quad \text{and} \quad f(x+2\pi) = f(x)$$

Question 2:

Find the Fourier series of following periodic square wave given by

$$f(x) = \begin{cases} 0 & \text{if} & -2 < x < -1 \\ k & \text{if} & -1 < x < 1 \\ 0 & \text{if} & 1 < x < 2 \end{cases}$$