## CE 1911

## Homework 2

1 - Create a transition table and determine the value of OUT


## 2 - Create a transition table and determine the value of $Q$ after each clock cycle

 (Assume $\mathrm{Q}=0$ initially and include it in the table)
$\mathrm{K}=1$ on $1^{\text {st }}$ clock edge
$\mathrm{K}=0$ on $2^{\text {nd }}$ clock edge
$\mathrm{K}=1$ on $3^{\text {rd }}$ clock edge
$\mathrm{K}=0$ on $4^{\text {th }}$ clock edge

3 - Identify the period, frequency and duty cycle of each waveform use engineering notation and without a calculator

$\longrightarrow|5 \mathrm{~ms}| \longleftarrow$


20pts
T= $\qquad$
F = $\qquad$
Duty = $\qquad$
$\mathrm{T}=$ $\qquad$
$F=$ $\qquad$
Duty = $\qquad$
$\mathrm{T}=$ $\qquad$
$\mathrm{F}=$ $\qquad$
Duty = $\qquad$
$\mathrm{T}=$
$\mathrm{F}=$ $\qquad$
$\mathrm{F}=$ $\qquad$
Duty = $\qquad$

4 - Write a short description of each of the following flip-flops


