Q1.46 cont.

B) $L = \{wtw \mid w, t \in \{0,1\}^{+}\}$

Pumping Lemma $s \in L$ where $|s| \geq p$

(a) $|y| > 0$ (b) $|xy| \leq p$ (c) $\forall i > 0, \ x y^i z \in L$

Assume L is regular, the $\bar{L}$ is regular aswell

$\bar{L} = \{w \mid w \in \{0,1\}$ not a palindrome$\}$

$\bar{L}$ has pumping length p, let $s = 0^p 1 0^p$

by (a) x and y are 0's, $y = 0^k$ for $0 < k \leq p$ $i = 2$

                                         $k \neq 0$

$x y^2 z = 0^{p+k} 1 0^p$ since there are now more

                           0's in front, this is not a

                           palindrome

      Since $\bar{L}$ is not regular by pumping Lemma,

neither is L