

**CS 302  
QUIZ 3****11 October, 2017****Duration : 15 minutes*****Do not forget to write your name on your paper !*****QUESTION**

*A string  $s$  is called a **palindrome** if  $s = s^R$  where  $s^R$  denotes  $s$  written in the reverse direction (as for example in **010** since  $(010)^R = 010$  ).*

*(a) (2pts) Find a Turkish or an English word that is palindrome when interpreted as a string of letters.*

*(b) (8pts) Using the pumping lemma show that the language*

*$L := (s \in \{0,1\}^* \mid s \text{ is a } \mathbf{palindrome})$  is **not** a regular language.*