

**CS 302
QUIZ 3**

8 October, 2019

Duration : 15 minutes

Do not forget to write your name on your paper !

QUESTION

(a) (3 pts) State the Pumping Lemma

(b) (7 pts) Is the language L where

$L := \{w \in \{a,b\}^* \mid a^p b^r; p > r; p, r = \text{non-negative integers}\}$ a regular language ?

If so find an NFA that accepts it ; if not prove it using the pumping lemma.