

CS 302
QUIZ 4

5 April 2023

Duration : 20 minutes

Closed Notes , Books and all Electronic Devices

Do not forget to write your name on your paper

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QUESTION (10 pts)

(a)(4 pts) Is the language $L_1 := (\omega \in \{0,1\}^* \mid \omega = 0^n 1^m 0^k ; n,m,k > 0)$ regular ?

Prove your claim by either exhibiting an NFA to accept it or a regular expression to represent it ; or by using the pumping lemma .

(b)(6 pts) Repeat part (a) for the language $L_2 := (\omega \in \{0,1\}^* \mid 0^n 1^m 0^n ; n,m > 0)$.