

CS 302
REMOTE QUIZ 3

17 March, 2021

Duration : 15 minutes

Closed Notes , Books and all Electronic Devices

Do not forget to write your name on your paper !

QUESTION

(a) (5 pts) State whether the language :

$L_1 := (w \in \{0,1\}^* \mid w = 0^n.1^k ; |n-k| \text{ is an odd number})$

is a **regular** language or not and **PROVE** your statement.

(b) (5 pts) Repeat the question in part (a) for the language :

$L_2 := (w \in \{0,1\}^* \mid w = 0^n.1^k ; |n-k| = 1)$