CS 302
REMOTE QUIZ 4

25 March, 2021

Duration : 15 minutes

Closed Notes , Books and all Electronic Devices

Do not forget to write your name on your paper !

QUESTION

(a) (3 pts) Let $A = (Q_A, \Sigma, \delta_A, s_A, F_A)$ and $B = (Q_B, \Sigma, \delta_B, s_B, F_B)$ be two DFAs. Define the product automaton $A \times B$ and in particular its transition function $\delta_{A \times B}$

(b) (7 pts) Describe an algorithm to determine whether two regular languages accepted by automata A and B share a string or not. Also describe the computational complexity of your algorithm as a large O function in terms of the parameters of A and B.