

CS 302
REMOTE QUIZ 6

15 April, 2021

Duration : 20 minutes

Closed Notes , Books and all Electronic Devices

Do not forget to write your name on your paper !

QUESTION

(a) (4 pts) State the CFG $G = (V, T, R, S)$ that generates the language of **regular expressions** over the alphabet set $\Sigma = \{0, 1\}$. In particular describe each entity V, T, S and all the productions in R .

(b) (6 pts) Consider the CFG $G = (\{S, A, B\}, \{a, b\}, R, S)$ where the productions in R are given as : $S \rightarrow a A S \mid b B S \mid e$; $A \rightarrow a A A \mid b$; $B \rightarrow b B B \mid a$.

(i) Is the string **baba** in L_G ? If so give both **leftmost** and **rightmost** derivations of it.

(ii) State the language L_G generated by this CFG G .