

CS 302

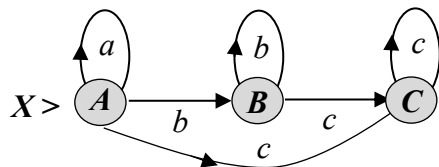
REMOTE QUIZ 6

9 December, 2020

ANSWERS

(a) (3 pts) See the relevant slide.

(b) (3 pts) L is a regular language accepted by the NFA X below



(c) (4 pts) The PDA $P = (\{q_0, f\}, \{a,b,c\}, \{a,b,c,Z_0\}, \delta, q_0, Z_0, \{f\})$ where δ is as given below accepts L_1 by final state . Therefore L_1 is a CFL .

$$(q_0, a, Z_0) \rightarrow (q_0, Z_0)$$

$$(q_0, b, X) \rightarrow (q_0, b X) ; X = Z_0 \text{ or } X = b$$

$$(q_0, c, b) \rightarrow (q_0, e)$$

$$(q_0, e, Z_0) \rightarrow (f, Z_0)$$