

CS 302
QUIZ 8

3 December, 2019

ANSWERS

$$(q_0, 0, X) \rightarrow (q_0, 0X) ; X=0,1, Z_0$$

$$(q_0, 1, X) \rightarrow (q_0, 1X) ; X=0,1, Z_0$$

$$(q_0, 2, X) \rightarrow (q, X) ; X=0,1, Z_0$$

$$(q, 1, 1) \rightarrow (q, e)$$

$$(q, 0, 0) \rightarrow (q, e)$$

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

*(a) (3 pts) **P** is a DPDA since the definition of a DPDA is satisfied by the above transitions.*

*(b) (7 pts) **L** accepted by **P** is given below.*

$$L = (\omega \in \{0,1,2\}^* \mid \omega = u 2 u^R ; u \in \{0,1\}^* ; u^R \text{ denotes } u \text{ written in reverse})$$