CS 302
QUIZ 6

15 November, 2017

ANSWERS

(a) *(5 pts)* $G=(V,T,P,S)$ *where* $V=\{S\}$, $T=\Sigma$, $P: S \rightarrow (0S0|1S1|0|1|e)$

(b) *(5 pts)* $P=(Q, \Sigma, \Gamma, \delta, q_0, Z_0, F)$ *where* $Q=\{q_0, q, f\}$, $\Gamma=\{S,0,1,Z_0\}$, $F=\{f\}$

and

δ *is given by :*

$(q_0, e, Z_0) \rightarrow (q, SZ_0)$ *(initial transition)*

$(q, e, Z_0) \rightarrow (f, Z_0)$ *(final transition)*

$(q, e, S) \rightarrow (q, 0S0)$, $(q, e, S) \rightarrow (q, 1S1)$,

$(q, e, S) \rightarrow (q, 0)$, $(q, e, S) \rightarrow (q, 1)$, $(q, e, S) \rightarrow (q, e)$ *(production transitions)*

$(q, 0, 0) \rightarrow (q, e)$, $(q, 1, 1) \rightarrow (q, e)$ *(input shaving transitions)*

then $L(P) = L_G$