

QUIZ 10 Answers

ANSWERS

(a) (5 pts) $G = (\{S, A\}, \{0, 1\}, R, S)$ where R is given as below:

$S \rightarrow (0S0 \mid A) ; A \rightarrow 1A \mid e$

$P = (\{q_0, q, f\}, \{0, 1\}, \{0, 1, A, S, Z_0\}, \delta, q_0, Z_0, \{f\})$ where δ is as given below.

$(q_0, e, Z_0) \rightarrow (q, SZ_0) ; (q, e, S) \rightarrow (q, 0S0) ; (q, e, S) \rightarrow (q, A) ;$

$(q, e, A) \rightarrow (q, 1A) ; (q, e, A) \rightarrow (q, e) ; (q, 0, 0) \rightarrow (q, e) ; (q, 1, 1) \rightarrow (q, e)$

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

(b) (5 pts)

Label	Condition	TM
$M >$	-	RA
A	$\sigma = 0$	$\# R_{\#} L B$
	$\sigma = 1$	$R_{\{0, \#\}} C$
	$\sigma = \#$	h_{YES}
B	$\sigma = 0$	$\# L_{\#} R A$
	$\sigma = 1$	h_{NO}
	$\sigma = \#$	h_{NO}
C	$\sigma = 0$	h_{NO}
	$\sigma = \#$	h_{YES}