Formal Languages
Professor Sherisholmon
Assignment 7
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1.) $S \rightarrow aS|hS|B$ (alb)*c* $B \rightarrow bb|C|\lambda$ hollables: {C,B,S}

 $S \rightarrow S' \mid \lambda$ $S' \rightarrow a \mid b \mid a S \mid b S \mid B$ $B \rightarrow b \mid C$ $C \rightarrow c \mid C \mid c$

7.) $S \rightarrow AS|A$ $A \rightarrow aA|bB|C$ $B \rightarrow bB|b$ $C \rightarrow cC|B$

chainable (S): {S,A,C,B}

(A): {A,C,B}

(B): {B}

(C): {C,B}

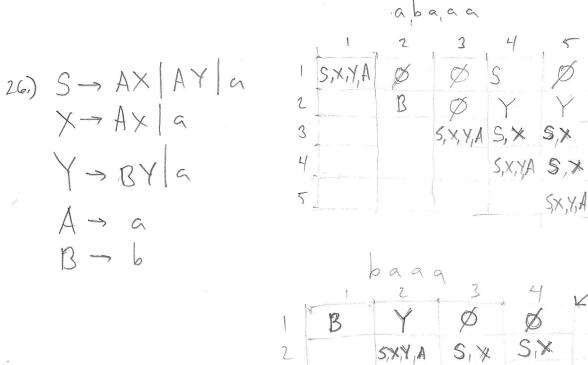
 $S \rightarrow AS | aA | bB | cC | bB | b$ $A \rightarrow aA | cC | bB | b$ $B \rightarrow bB | b$ $C \rightarrow cC | bB | b$

(atbt|atctbt|bt|ctbt)t

14.) S → AA (CD 6B Term $\{A,D\} \cup \{S\} \cup \{J\} \Rightarrow \{A,D,S\}$ A - aA a Prev {A,D} ~ [5] B -> bB bC C> cB D > dD | d Reach {S}U{A}, > {S,A}

Prev {} {S} SAA A -aA a D > 10 d SAA A -> aA a. mullables: {A,S} S - A | ABa | AbA A > Aala A -> Aa /2

S -> 2 | A AB a A b A Ba A b b A b B-Bb/BC C-CB|CA|6B B-36/BC S-2 AalalABalAbA BalAb 16A16 C - CB CA 63 chains (5): {5, A} S-2/AA'aATIAB'B'AIb (A): (A)A No change (B): {B} A -> a (c): {c} B' -> b Frm {S, A} S > 2 | Aala | AbA | Ab| bA | b A -> AA' a T - B'A A - Aa a Reach {S,A}



32.)

order:
$$S \rightarrow A \rightarrow B \rightarrow C$$
 $S \rightarrow AB|BC$
 $A \rightarrow AB|a$
 $B \rightarrow AA|CB|b$
 $A \rightarrow B|BR$
 $A \rightarrow B|BR$
 $A \rightarrow A|CB|b$
 $A \rightarrow A|CB|b$

S-aBlaR, BlaAclaR, AclaBc/bc
S-aBlaR, BlaAclaR, AclaBc/bc
A-alaR,

SXXA SX

S,X,Y,A