Names: _____

CS 321H Activity 5

1. Convert the following CFG to CNF

$S \rightarrow ABa \mid AC$

$A \rightarrow Ab \mid a$

$B \rightarrow b \mid C \mid \lambda$

$C \rightarrow aa$

Names: _____

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2. Consider the CNF grammar G = (V,T,S,P) where

V = {S, A, B, C, D }, T = { a, b, c }, S = S and P is given below.

S → AB | AC

A → AA | AB | a

B → BB | BC | b

C → CC | b | c

Use the CKY to determine if the string w = aabbc are in the language L(G). If the string is in L(G) construct the parse tree.

Names: _____

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3. Construct an NPDA for the language L = { $a^n b^n c^{m|}$: $n \geq 0$, $m \geq 1$ }. Include a screenshot of the transition graph below and submit the JFLAP file.