CMSC 330, Fall 2017 Quiz 3

Name *(as it appears on Gradescope)* _____

Discussion Time (circle one) 10am 11am 12pm 1pm 2pm 3pm

Discussion TA (circle one) Joseph Greg Justin Michael P. BT Daniel David Derek

˜ Cameron Eric Kesha Shriraj Pei-Jo Michael S. Bryan Kameron

Instructions

- Do not start this quiz until you are told to do so.
- You have 15 minutes for this quiz.
- This is a closed book quiz. No notes or other aids are allowed.
- For partial credit, show all your work and clearly indicate your answers.

1. *(6 points)* Write a context free grammar that generates strings of the form a∗b+.

2. *(7 points)* Give the *rightmost* derivation of the string "ababcd" for the given CFG.

    S → SS | T
    T → ab | TR
    R → cd

3. *(7 points)* Show that the following CFG is ambiguous.

   S → S xor S | S nand S | true | false