CS3350 – Quiz 12 **November 5, 2014**
10 minutes / 10 points
NAME: ……SOLUTION……

1. Is the following grammar ambiguous? Why?

E → E + E | T
T → T * T | F
F → 5 | (E)

The string 5+5+5 has two possible derivation trees. (Please see class notes for these two trees).

As soon as, for one given string, you can show that there exist at least 2 derivation trees, you have shown that the grammar is ambiguous.

2. Given a PDA that recognizes some language L and a string s, what do you need to show to guarantee that s is not a string of language L?

For a string not to be validated as part of a language L through L's PDA execution, all branches of the execution tree of this PDA should lead to a dead end.

3. Given a PDA that recognizes some language L and a string s, what do you need to show to guarantee that s is a string of language L?

For a string to be validated as part of a language L through L's PDA execution, one of the branches of the execution tree of the PDA needs to reach success.