The first written assignment

CSC 340

2nd term 2016-2017

Q1. Consider the following CFG

EXAMPLE 3.3	An Ambiguous Grammar for Simple Assignment Statements
	<assign> → <id> = <expr> <id> → A | B | C <expr> → <expr> + <expr> | <expr> * <expr> | (<expr>) | <id>

a) What operation has the highest precedence (* or +)?
b) What is the associativity of + operation (left or right)?
c) What is the associativity of * operation?
d) Give 3 expressions to show that the grammar is ambiguous and draw the corresponding parse trees.
e) Rewrite the grammar to eliminate all ambiguities. In such a way that * and + have left associativity and * has higher precedence than +.

Q2) Consider the following grammar over the alphabet ∑ = {u; v; w; x; y; z}: •

S -> UVW
U -> u | Wv | ξ
V -> w | xU |v| ξ
W -> y | z|v

A) Give the first sets of the non-terminals.

B) Give the follow sets of the terminals and non-terminals.

Due Date 12 April 2017