1) 1) Consider the grammar (the one in bold are terminals)

\[
E \rightarrow E \text{ OR } T \mid T \\
T \rightarrow T \text{ and } F \mid F \\
F \rightarrow \text{not } F \mid (E) \mid \text{true} \mid \text{false}
\]

a) Construct a parse tree for sentence (3 points)

\[
\text{not (true or false)}
\]

b) Show that this generates all Boolean expressions. (5 points)

Hint: First show it generates true, false
Then or expressions, and expressions and then
Parenthesized Boolean expressions.

c) Is this grammar ambiguous? (2 points)

d) Construct a LL(1) table for this grammar. (10 points)

(Hint: There will be many conflicts)