

Quiz 1

Student ID:

Marks: 10 points, Time: 30 minutes

Student Name:

Question 1 (10 points): Construct the LR(0) automaton of the following grammar. Here $\{=, \cdot, \text{id}, +, /, \text{num}, (,)\}$ are terminal symbols or tokens. Remember to augment the grammar first.

$A \rightarrow N = E;$
 $N \rightarrow \text{id}$
 $E \rightarrow E + T$
 $E \rightarrow T$
 $T \rightarrow T / F$
 $T \rightarrow F$
 $F \rightarrow \text{num}$
 $F \rightarrow (E)$

Scoring Rubric: 3 points allocated for proper state transition arrows and 7 points for drawing the states and writing item sets inside states. You will lose 0.5 points for each missing arrow and incorrect state.

