

Name: Mohamed Abdelrahman Aboelkassem

Code: 180113

Course name: Compiler Construction

Context Free Grammar of “for loop” statement

Let G: <stmt> => <for-stmt>

<for-stmt> => for (<expression>; <expression>; <expression>)

<expression> => <assignment> | <relational_expression> | <increment> | <decrement>

<assignment> => <arth.E> <assignment_op> <arth.E>

<assignment_op> => = | += | -= | *= | /= | % =

<relational_expression> => <expression> <rel_op> <expression>

<rel_op> => <|> | <=> | >= | == | !=

<increment> => <prefix_increment> | <postfix_increment>

<prefix_increment> => ++<arth.E>

<postfix_increment> => <arth.E> ++

<decrement> => <prefix_decrement> | <postfix_decrement>

<prefix_decrement> => --<arth.E>

<postfix_decrement> => <arth.E> --

<arth.E> => <id> | <const>

<id> => x | y

<const> => 1 | 2 | 3 |