**PRACTICAL # 11**

**OBJECT:**

CFG of conditional statements.

**THEORY:**

The conditional statements provide branching mechanism in a programming language. The common keyword for conditionals is if which is optionally followed by else. A typical if statement contains one or more conditions. If the condition(s) are evaluated as true, the body of if statement is executed. In case the condition(s) are not evaluated as true, the body of if is not executed. However, in case else keyword is provided with the if, its body is executed.

**IF – Else Statement CFG**

*<If\_st> -> if (<Cond>) <If\_body><Else\_st>*

*<If\_body> -> ; | <S\_st> | {<M\_st>}*

*<Else\_st> -> else <If\_body> | ε*

The single statement and multiple statements CFGs for a simple language can be defined as:

*<S\_st> -> <Wh\_st> | <DoWh\_st> | <If\_st> | <For\_st> | <Dec\_st> | return<Const> | break; | continue;*

*<M\_st> -> <S\_st> <M\_st> | ε*

**ACTIVITIES**

**Activity 1**

Design the conditional statement CFG of your own language.

**REVIEW QUESTIONS**

1. What are conditional statements used for?
2. How are conditional statements nested ?
3. How do you use else statement?