20)condition statement: “starts with Condition followed by zero or more Boolean\_Operator and Condition (e.g. x < 5 && x > 1)”.

CondStat 🡪 cond CondStat’

Condstat’ 🡪 boolOP cond CondStat’ | **ε**

21) If\_Statement: starts with reserved keyword “if” followed by Condition\_Statement then reserved keyword “then” followed by set of Statements (i.e. any type of statement: write, read, assignment, declaration, …) then Else\_If\_Statment or Else\_Statment or reserved keyword “end”

IfStat 🡪 “if” CondStat “then” Statements ( ElseIfStat | ElseStat | end)

IfStat 🡪 “if” CondStat “then” Statements B

B 🡪 ElseIfStat | ElseStat | “end”

22) Else\_If\_Statement: same as if statement but starts with reserved keyword “elseif”

ElseIfStat 🡪 “elseif” CondStat “then” Statements B

B 🡪 ElseIfStat | ElseStat | “end”

23) Else\_Statement: starts with reserved keyword “else” followed by a set of Statements then ends with reserved keyword “end”

ElseStat 🡪 “else” Statements “end”

24) Repeat\_Statement: starts with reserved keyword “repeat” followed by a set of Statements then reserved keyword “until” followed by Condition\_Statement

RepStat 🡪 “repeat” Statements “until” CondStat

26) Parameter: starts with Datatype followed by Identifier   
(e.g. int x)

Parameter 🡪 Datatype Identifier

27) Function\_Declaration: starts with Datatype followed by FunctionName followed by “(“ then zero or more Parameter separated by “,” then “)” (e.g. int sum(int a, int b) | …)

FuncDecl 🡪 Datatype Identifier ‘(‘ Parameter | Parameter , Parameter | **ε ‘)’**

FuncDecl 🡪 Datatype Identifier ‘(‘ B ‘)’

B 🡪 Parameter C | **ε**

C 🡪 “,” Parameter C | **ε**

28) Function\_Body: starts with curly bracket “{” then a set of Statements followed by Return\_Statement and ends with “}”

FuncBody 🡪 ‘{‘ Statements RetStat ‘}’

29) Function\_Statement: starts with Function\_Declaration followed by Function\_Body

FuncStat 🡪 FuncDecl FuncBody

30) Main\_Function: starts with Datatype followed by reserved keyword “main” then “()” followed by Function\_Body

MainFunc 🡪 Datatype “main” “()” FuncBody

31) Program: has zero or more Function\_Statement followed by Main\_Function

Program 🡪 B MainFunc

B 🡪 FuncStat B | **ε**