```
1)  Program          ::= ProgramHead    DeclarePart    ProgramBody
2)  ProgramHead       ::= PROGRAM   ProgramName
3)  ProgramName       ::= ID
4)  DeclarePart       ::= TypeDec   VarDec   ProcDec
5)  TypeDec           ::= $   |   TypeDeclaration
6)  TypeDeclaration   ::= TYPE  TypeDecList
7)  TypeDecList       ::= TypeId = TypeName ; TypeDecMore
8)  TypeDecMore       ::= $   |   TypeDecList
9)  TypeId            ::= ID
10) TypeName          ::= BaseType  |  StructureType   |   ID
11) BaseType          ::= INTEGER  |  CHAR
12) StructureType     ::= ArrayType  |   RecType
13) ArrayType         ::= ARRAY [low..top ] OF BaseType
14) Low               ::= INTC
15) Top               ::= INTC
16) RecType           ::= RECORD  FieldDecList      END
17) FieldDecList      ::= BaseType  IdList ; FieldDecMore  |   ArrayType IdList ;
FieldDecMore
18) FieldDecMore      ::= $   |   FieldDecList
19) IdList            ::= ID  IdMore
20) IdMore            ::= $   |   ,IdList
21) VarDec            ::= $   |   VarDeclaration
22) VarDeclaration    ::= VAR   VarDecList
23) VarDecList        ::= TypeName  VarIdList ;  VarDecMore
24) VarDecMore        ::= $   |   VarDecList
25) VarIdList         ::= id    VarIdMore
26) VarIdMore         ::= $   |   ,  VarIdList
27) ProcDec           ::= $   |   ProcDeclaration
28) ProcDeclaration   ::= PROCEDURE
                          ProcName ( ParamList )  ;
                          ProcDecPart
                          ProcBody
                          ProcDecMore
29) ProcDecMore       ::= $   |   ProcDeclaration
30) ProcName          ::= ID
31) ParamList         ::= $   |   ParamDecList
32) ParamDecList      ::= Param   ParamMore
33) ParamMore         ::= $   |  ; ParamDecList
34) Param             ::= TypeName  FormList | VAR TypeName   FormList
35) FormList          ::= ID  FidMore
36) FidMore           ::= $   |  , FormList
37) ProcDecPart       ::= DeclarePart
38) ProcBody          ::= ProgramBody
39) ProgramBody       ::= BEGIN   StmList END
40) StmList           ::= Stm       StmMore
41) StmMore           ::= $   |  ;   StmList
42) Stm               ::= ConditionalStm |LoopStm |InputStm |OutputStm |ReturnStm
|ID AssCall
43) AssCall           ::= AssignmentRest | CallStmRest
44) AssignmentRest    ::= VariMore         := Exp
45) ConditionalStm    ::= IF RelExp THEN   StmList ELSE StmList   FI
46) LoopStm           ::= WHILE  RelExp DO StmList   ENDWH
47) InputStm          ::= READ ( Invar)
48) Invar             ::= ID
```

```
49) OutputStm      ::= WRITE( Exp )
50) ReturnStm      ::= RETURN ( Exp )
51) CallStmRest    ::= ( ActParamList )
52) ActParamList   ::= $  |  Exp  ActParamMore
53) ActParamMore   ::= $  |  ,  ActParamList
54) RelExp         ::= Exp  OtherRelE
55) OtherRelE      ::= CmpOp  Exp
56) Exp            ::= Term  OtherTerm
57) OtherTerm      ::= $  |  AddOp  Exp
58) Term           ::= Factor  OtherFactor
59) OtherFactor    ::= $  |  MultOp  Term
60) Factor         ::= ( Exp )  |  INTC|  Variable
61) Variable       ::= ID  VariMore
62) VariMore       ::= $  |  [ Exp ]  |  .  FieldVar
63) FieldVar       ::= ID  FieldVarMore
64) FieldVarMore   ::= $  |  [ Exp ]
65) CmpOp          ::= <  |  =
66) AddOp          ::= +  |  -
67) MultOp         ::= *  |  /
```