Examen Final – A01420842

Gramática

Program -> Deflist;

Deflist -> A;

A -> Def A | Ɛ;

Def -> Vardef | Fundef;

Vardef -> double Vardefpp | int Vardefp;

Vardefp -> Varlist ';' | eq Varlist ';';

Vardefpp -> Varlist ';' | eq Varlist ';';

Varlist -> Idlist;

Id -> id;

Idlist -> Id Idlistcont;

Idlistcont -> comma Id Idlistcontp | Ɛ ;

Idlistcontp -> Idlistcont | eq Idlistcont;

Fundef -> Id lparen Paramlist rparen lbrace Vardeflist Stmtlist rbrace;

Paramlist -> Id Idlistcont | Ɛ ;

Vardeflist -> B;

B -> Vardef B | Ɛ ;

Stmtlist -> C;

C -> Stmt C | Ɛ ;

Stmt -> id StmtP | Stmtif | Stmtreturn | Stmtempty;

StmtP -> eq Expr ';' | plusplus ';' | minusminus ';' | lparen Exprlist rparen;

Stmtincr -> Id plusplus ';';

Stmtdecr -> Id minusminus ';';

Stmtfuncall -> Funcall ';';

Funcall -> Id lparen Exprlist rparen;

Exprlist -> Expr Exprlistcont | Ɛ;

Exprlistcont -> comma Expr Exprlistcont | Ɛ;

Stmtif -> if lparen Expr rparen lbrace Stmtlist rbrace Elseiflist Else;

Elseiflist -> D;

D -> elseif lparen Expr rparen lbrace Stmtlist rbrace D | Ɛ;

Else -> else lbrace Stmtlist rbrace | Ɛ;

Stmtreturn -> return Expr ';';

Stmtempty -> ';';

Expr -> Expror;

Expror ->Exprand E;

E -> or Exprand E | Ɛ ;

Exprand -> Exprcomp F;

F -> and Exprcomp F | Ɛ;

Exprcomp -> Exprrel G;

G -> Opcomp Exprrel G | Ɛ ;

Opcomp -> equalsequals;

Exprrel -> Expradd H;

H -> Oprel Expradd H | Ɛ ;

Oprel -> lessthan | greaterthan;

Expradd -> Exprmul I;

I -> Opadd Exprmul I | Ɛ ;

Opadd -> plus | minus;

Exprmul -> Exprunary J;

J -> Opmul Exprunary J | Ɛ ;

Opmul -> asterisk | slash;

Exprunary -> Opunary Exprunary | Exprprimary;

Opunary -> plus | minus;

Exprprimary -> id ExprprimaryP | Lit | lparen Expr rparen;

ExprprimaryP -> lparen Exprlist rparen | Ɛ ;

Lit ->litint;

Sección B

|  |  |  |  |
| --- | --- | --- | --- |
| id | op | arg1 | arg2 |
| 1 | == | i | #0 |
| 2 | goto | (3) | (1) |
| 3 | goto | (17) |  |
| 4 | int | j |  |
| 5 | = | j | #0 |
| 6 | < | j | #100 |
| 7 | goto | (8) | (6) |
| 8 | goto | (17) |  |
| 9 | int | i |  |
| 10 | \* | m | #2 |
| 11 | = | i | (10) |
| 12 | param | i |  |
| 13 | param | j |  |
| 14 | call | suma | #2 |
| 15 | = | aux | (14) |
| 16 | ++ | j |  |