

Ans 2:

Step 1: Augment Grammar

$E' \rightarrow E$  ①

$E \rightarrow E + T$  ②

$E \rightarrow T$  ③

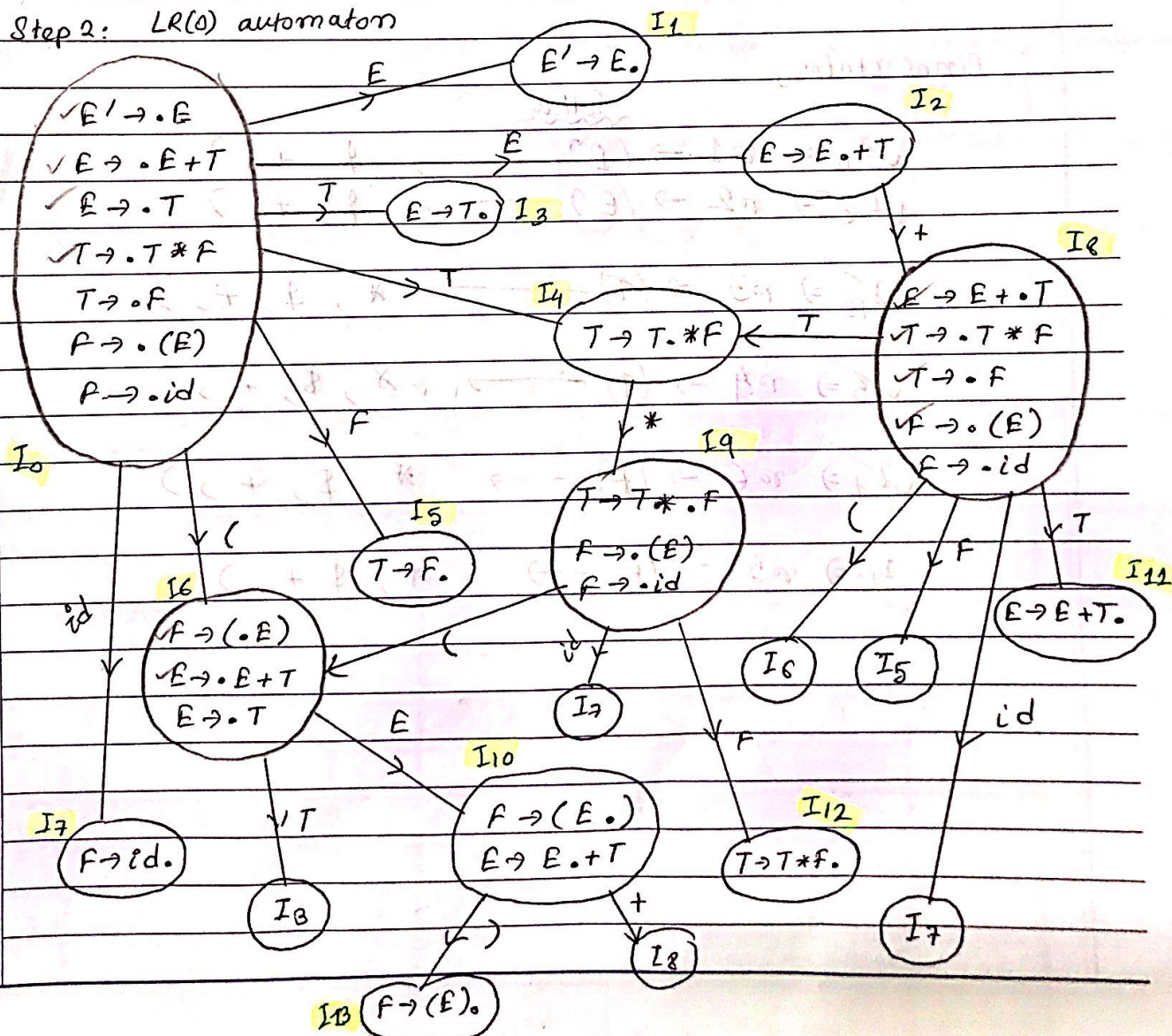
$T \rightarrow T * F$  ④

$T \rightarrow F$  ⑤

$F \rightarrow (E)$  ⑥

$F \rightarrow id$  ⑦

Step 2: LR(0) automaton





### Variables

	FIRST	FOLLOW
E	{ (, id }	{ \$, +, ) }
T	{ (, id }	{ *, \$, +, ) }
F	{ (, id }	{ *, \$, +, ) }

### Final states,

- Follow
- $\checkmark I_{11} \Rightarrow r_1 \rightarrow (E) \longrightarrow \$, +, )$   
 $\checkmark I_3 \Rightarrow r_2 \rightarrow (E) \longrightarrow \$, +, )$   
 $\checkmark I_{12} \Rightarrow r_3 \rightarrow (T) \longrightarrow *, \$, +, )$   
 $\checkmark I_5 \Rightarrow r_4 \rightarrow (T) \longrightarrow *, \$, +, )$   
 $\checkmark I_7 \Rightarrow r_6 \rightarrow (F) \longrightarrow *, \$, +, )$   
 $I_{13} \Rightarrow r_5 \rightarrow (F) \longrightarrow *, \$, +, )$



ACTION							GOTO		
	id	+	*	(	)	\$	E	T	F
0	s7			s6			1,2	3,4	5
1						accept			
2		s8							
3		r2			r2	r2			
4			s9						
5		r4	r4		r4	r4			
6							10	3	
7		r6	r6		r6	r6			
8	s7			s6				4,11	5
9	s7			s6					12
10		s8			s13				
11		r1			r1	r1			
12		r3	r3		r3	r3			
13		r5	r5		r5	r5			