What is the Predict Set for each Production Rule in this Grammar?

Recall a **predict set** for a production rule $A \rightarrow \mathcal{X}\beta$ is:

$$First(\mathcal{X}\beta) \underbrace{\bigcup Follow(A)}_{\text{if } \mathcal{X}\beta \Rightarrow^* \lambda}$$

(As always, use a lookahead of $k = 1$)

mobile	rules
`*(0|1|2)`	1, 4, 7
`*(3|4)`	2, 5, 8
`*(5|6)`	3, 6, 9
`*(7|9)`	4, 7, 10, 11

#	Rules
1	$S \rightarrow A\,B\,C\,\$$
2	$A \rightarrow \lambda$
3	$A \rightarrow E$
4	$A \rightarrow F$
5	$B \rightarrow m\,n\,o\,p$
6	$C \rightarrow B\,A\,z$
7	$C \rightarrow A\,B\,z$
8	$E \rightarrow s$
9	$E \rightarrow t$
10	$F \rightarrow \lambda$
11	$F \rightarrow z\,E$

Download a `*.cfg` from the schedule page and “use the source, Luke!”

Predict Sets

#	$p \in P$	Computed By	Predict Set
1	$S \rightarrow A\ B\ C\ \$$	$FirstSet(RHS)$	m, s, t, z
2	$A \rightarrow \lambda$	$FollowSet(LHS)$	m, z
3	$A \rightarrow E$	$FirstSet(RHS)$	s, t
4	$A \rightarrow F$	$FirstSet(RHS) \bigcup FollowSet(LHS)$	m, z
5	$B \rightarrow m\ n\ o\ p$	$FirstSet(RHS)$	m
6	$C \rightarrow B\ A\ z$	$FirstSet(RHS)$	m
7	$C \rightarrow A\ B\ z$	$FirstSet(RHS)$	m, s, t, z
8	$E \rightarrow s$	$FirstSet(RHS)$	s
9	$E \rightarrow t$	$FirstSet(RHS)$	t
10	$F \rightarrow \lambda$	$FollowSet(LHS)$	m, z
11	$F \rightarrow z\ E$	$FirstSet(RHS)$	z

Predict Sets

#	$p \in P$	Computed By	Predict Set
1	$S \rightarrow A\ B\ C\ \$$	$FirstSet(RHS)$	`m`, `s`, `t`, `z`
2	$A \rightarrow \lambda$	$FollowSet(LHS)$	`m`, `z`
3	$A \rightarrow E$	$FirstSet(RHS)$	`s`, `t`
4	$A \rightarrow F$	$FirstSet(RHS) \bigcup FollowSet(LHS)$	`m`, `z`
5	$B \rightarrow m\ n\ o\ p$	$FirstSet(RHS)$	`m`
6	$C \rightarrow B\ A\ z$	$FirstSet(RHS)$	`m`
7	$C \rightarrow A\ B\ z$	$FirstSet(RHS)$	`m`, `s`, `t`, `z`
8	$E \rightarrow s$	$FirstSet(RHS)$	`s`
9	$E \rightarrow t$	$FirstSet(RHS)$	`t`
10	$F \rightarrow \lambda$	$FollowSet(LHS)$	`m`, `z`
11	$F \rightarrow z\ E$	$FirstSet(RHS)$	`z`

Is there going to be a problem using **recursive descent**, or "LL(1)," parsing for this language?