

Compiler Design (1<sup>st</sup> Quiz)

1. Consider the grammar

[3]

$$S \rightarrow Aa \mid b$$

$$A \rightarrow Ac \mid Se \mid d \mid \epsilon$$

Construct an equivalent grammar with no left recursion and with minimum number of production rules.

2. Consider the grammar shown below

[3]

$$S \rightarrow i E t S S' \mid a$$

$$S' \rightarrow e S \mid \epsilon$$

$$E \rightarrow b$$

In the predictive parse table.  $M$ , of this grammar, the entries  $M[S', e]$  and  $M[S', \$]$  respectively are

3. Consider the following grammar.

[4]

$$S \rightarrow aABC$$

$$B \rightarrow a \mid \epsilon$$

$$C \rightarrow b \mid \epsilon$$

$$A \rightarrow a \mid bb$$

Calculate first and follow set.