Formal Languages and Compilers

Name: _____

1 – Find the minimum state automaton accepting the union of the languages denoted by the following regular expressions :

$$(0^*1 \mid 10^*)^* 0$$

$$(0 \mid 11)^* 01$$

2 – Find a pushdown automaton accepting the language: $\{ b^{2m} a^{n+m+1} b^{2n} \mid m >= 0 , n >= 0 \}$.

3 – Find the LALR(1) parsing table for the following grammar:

$S \rightarrow S\ S\ + \mid x$

4 – Transform the following SDT so that it can be implemented by a bottom-up parser.
Then indicate which string will be printed when the input is "ccaba":

$S \rightarrow c$ {print "x"} $S\ S$
$S \rightarrow$ {print "y"} a
$S \rightarrow b$ {print "z"}