

Computer Science Language Processors

Rules

- The duration of the test is **90 minutes**
- Questions will not be answered during the test
- One cannot re-enter the classroom after leaving it
- The answers must be written using a pen (not a pencil)

1.- Given the grammar:

$$\begin{array}{l} S ::= AD \\ A ::= bB \mid \lambda \\ B ::= Ca \mid D \\ C ::= a \mid \lambda \\ D ::= b \mid c \end{array}$$

- Construct the parsing table for the SLR(1) parser and represent the DFA that is obtained using this methodology.
- Construct the parsing table for the LR(1) parser.
- Construct the parsing table for the LALR(1) parser.
- Extract conclusions about which methods can be used or not and show how the input string *abece* would be analyzed using the correct ones.
- Complete the parsing table for the SLR(1) parser to provide the user with detailed information about the different errors that can be detected during the parsing process.