DEPARTMENT OF COMPUTER SCIENCE
CARLOS III UNIVERSITY OF MADRID

Computer Science
Language Processors

Rules

- The duration of the test is **60 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:

```
D ::= bA | cX | d
X ::= MbA | BF
M ::= cM | l
A ::= MBj | F
B ::= c | l
F ::= fA | l
```

a) **Calculate the FIRST and FOLLOW sets.**

b) **Using the algorithm, determine if it is an LL(1) grammar.**

c) **Construct the analysis table for the LL(1) table-driven top-down predictive parsing.**

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