

# CMPE 222

## Spring 2018

### Popup Quiz #2

Name Lastname:

ID:

Duration : 30 mintes

|          |       |      |      |     |      |      |
|----------|-------|------|------|-----|------|------|
| SCORE    | : 1.a | 1.b. | 1.c. | 2.a | 2.b. | 2.c. |
| $\Sigma$ | :     |      |      |     |      |      |

(50 pts)

1. Consider the following grammar G:

$S \rightarrow ABa$

$A \rightarrow aA \mid \varepsilon$

$B \rightarrow bB \mid \varepsilon$

- Is G a regular grammar? (Why/why not?)
- Describe the language that G generates as a regular expression.
- Write a regular grammar equivalent to G.

(50 pts)

2. Consider the following regular expression:

$(a \cup b^*)a^*$

- Write 5 strings that belong to the language described by this regular expression.
- Write 5 strings that do NOT belong to the language described by this regular expression
- Write a regular grammar that describes this language.

**ANSWERS:**