

**CS 302**  
**QUIZ 2**

**20 February, 2020**

***Duration : 15 minutes***

***Do not forget to write your name on your paper !***

**QUESTION**

*Given the regular expression  $E = (a.b^*.a)^*$ .*

- (a) (3 pts) Construct an equivalent  $\varepsilon$ -NFA  $X$  with no more than 3 states that accepts the language corresponding to  $E$ .*
- (b) (3 pts) State an NFA  $Y$  such that  $L(Y)=L(X)$*
- (c) (4 pts) State a DFA  $Z$  such that  $L(Z) = L(X)$ .*