

**CS 302**  
**QUIZ 5**

*19 April 2023*

***Duration : 20 minutes***

***Closed Notes , Books and all Electronic Devices***

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

***QUESTION (10 pts)***

***(a)(3 pts) State the definition of a **deterministic** pushdown automaton DPDA .***

***(b)(7 pts) Construct a PDA **P** for the language  $L = (\omega \in \{0,1\}^* \mid 0^n 1^m, 0 \leq n \leq 2m)$***

***Is your PDA a DPDA ? Explain.***