

**CS 302
QUIZ 6****24 November, 2016****Duration : 15 minutes*****Do not forget to write your name on your paper !*****QUESTION**

Consider the CFG : $G = (\{S, A, B, C\}, \{0, 1\}, P, S)$ where

$P : S \rightarrow ACB, A \rightarrow 0A1 \mid \epsilon, B \rightarrow 1B0 \mid \epsilon, C \rightarrow 1C \mid \epsilon$

(a) (4 pts) State a **PDA** that accepts the language L_G where G is as given above.

(b) (6 pts) State **PDA**s that accept the languages L_1 and L_2 given below

$L_1 = (\omega \in \{0, 1\}^* \mid \omega = 0^n 1^m ; n > m \geq 0)$

$L_2 = (\omega \in \{0, 1\}^* \mid \omega = 0^n 1^m 0^k ; m \geq n+k, m, n, k \geq 0)$