CS 302   *24 November, 2016*
QUIZ 6

ANSWERS

(a) *(4 pts)* $(q_0, e, Z_0) \rightarrow (q_0, SZ_0)$; $(q_0, e, S) \rightarrow (q_0, ACB)$; $(q_0, e, A) \rightarrow (q_0, 0A1)$

$(q_0, e, A) \rightarrow (q_0, e)$; $(q_0, e, B) \rightarrow (q_0, 1B0)$; $(q_0, e, B) \rightarrow (q_0, e)$;

$(q_0, e, C) \rightarrow (q_0, 1C)$; $(q_0, e, C) \rightarrow (q_0, e)$;

$(q_0, 0, 0) \rightarrow (q_0, e)$; $(q_0, 1, 1) \rightarrow (q_0, e)$; $(q_0, e, Z_0) \rightarrow (q_0, e)$ or (f, Z_0)

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

for L_1 *(both **f** and **g** are final states)* **:**

$(q_0, 0, Z_0) \rightarrow (f, Z_0)$; $(f, 0, Z_0) \rightarrow (f, 0Z_0)$; $(f, 0, 0) \rightarrow (f, 00)$; $(f, 1, 0) \rightarrow (g, e)$;

$(g, 1, 0) \rightarrow (g, e)$

for L_2 : *the **PDA** in part **(a)** since $L_2 = L_G$*