Assignment 14

Automata & Theory of Computation

Student ID: **Name:**

1. Answer the following questions.

1) Fill in the blanks to construct an npda $M=(\{q_0,q_1,q_2\},\{a,b\},\{c,z\},\delta,q_0,z,\{q_2\})$ that accepts the language $L=\{a^n b^{3n} : n \geq 0\}$.

$\delta(q_0,\ \lambda,\ z)\ =\ \{\ (q_1,\ z)\ \},$

$\delta(q_1,\ \lambda,\ z)\ =\ \{\ (q_2,\ z)\ \},$

$\delta(q_0,\ a,\ z)\ =$ [ ]

[ ]

[ ]

[ ]

2) Fill in the blanks to show the npda above accepts the string *abbb*.

$(q_0,\ abbb,\ z) \vdash$ [ ] $\vdash$ [ ] $\vdash$

[ ] $\vdash$ [ ] $\vdash\ (q_2,\ \lambda,\ z)$