Review 19

Automata & Theory of Computation

Student ID: **Name:**

1. Consider an npda with

$$Q = \{q_0, q_1, q_2, q_3\},$$
$$\Sigma = \{a, b\},$$
$$\Gamma = \{0, 1\},$$
$$z = 0,$$
$$F = \{q_3\},$$

with initial state q_0 and

$$\delta(q_0, a, 0) = \{(q_1, 10), (q_3, \lambda)\},$$
$$\delta(q_0, \lambda, 0) = \{(q_3, \lambda)\},$$
$$\delta(q_1, a, 1) = \{(q_1, 11)\},$$
$$\delta(q_1, b, 1) = \{(q_2, \lambda)\},$$
$$\delta(q_2, b, 1) = \{(q_2, \lambda)\},$$
$$\delta(q_2, \lambda, 0) = \{(q_3, \lambda)\}.$$

Show that npda accepts the string aaabbb.

2. Draw the transition graph of the npda in problem 1.