

Review 21

Automata & Theory of Computation

Student ID:

Name:

1. Answer the following questions.

(1) Construct an npda that accepts the language generated by a grammar with productions

$$S \rightarrow aSbb|a.$$

(2) Show that the npda in (1) accepts the string aabb.

2. Answer the following questions.

(1) Construct an npda that accepts the language generated by a grammar with productions

$$\begin{aligned} S &\rightarrow aA, \\ A &\rightarrow aABC \mid bB \mid a, \\ B &\rightarrow b, \\ C &\rightarrow c. \end{aligned}$$

(2) Show that the npda in (1) accepts the string aaabc.