

**CS-302 Theory of Computation
Assignment 10**

Name: _____

1. Consider the grammar

$$S \rightarrow aS \mid aSbS \mid \lambda$$

- a) Give a derivation for the string *aaabaab*.

- b) Describe the language of the grammar.

2. Consider the grammar

$$\begin{aligned} S &\rightarrow AB \\ A &\rightarrow aAa \mid \lambda \\ B &\rightarrow bBb \mid \lambda \end{aligned}$$

- c) Give a derivation for the string *aaaabbbbbbb*.

- d) Describe the language of the grammar.
