



**Course Name: (1) : Selective Course (2) (Compilers)**

**Program:** Computer and Control Eng. (CCE 389) Program

**Academic Year:** 2022-2023

**Level:** third Year

**Semester:** Second term

**Sheet No. (3)**

**Subject: Compiler Design**

**Q1:** Consider the following grammar-

$$S \rightarrow bB \mid aA$$

$$A \rightarrow b \mid bS \mid aAA \mid \epsilon$$

$$B \rightarrow a \mid aS \mid bBB \mid \epsilon$$

For the string  $w = aababb$ , find-

1. Leftmost derivation
2. Rightmost derivation
3. Parse Tree

**Q2:** Consider the grammar-

$$S \rightarrow A1B$$

$$A \rightarrow 0A \mid \epsilon$$

$$B \rightarrow 0B \mid 1B \mid \epsilon$$

For the string  $w = 01101$ , find-

4. Leftmost derivation
5. Rightmost derivation
6. Parse Tree