

**Group-1 (Student ID: 1801001F-1801020M)**

**Marks: 40**

**Time: 1.20Hrs**

1. Write a C program to recognize strings under 'b<sup>+</sup>ab\*' over  $\Sigma=\{a, b\}$ . (20)

**Note:** The logic will be based on the concept of finite automata. Don't use any other shortcut ways.

Sample Input	Sample Output
Enter a string: ba	Accepted
Enter a string: a	Rejected
Enter a string: abbb	Rejected
Enter a string: bbabb	Accepted

2. Write a C program to construct a recursive descent parser for the following grammar:(20)

**E -> num T**

**T -> \* num T |  $\epsilon$**

Sample Input	Sample Output
Enter a string: 2*6\$	Accepted
Enter a string: 26*	Rejected