

EE1102 Introduction to Programming

Exam – Part 3

Submission Procedure: Upload the C program file by the due date and time. The file should be named as specified in each problem statement. Replace ROLLNO with your roll number (all small letters). **Do not upload exe files.**

Problem (40 marks including 10 marks for Q&A, Recommended Time: 25 min)

Write a C program called `ROLLNO_str_compress.c` that will perform string compression as shown in the examples below.

Examples:

Suppose you are given a string "aacbbdeefGgggh", the compressed output representation of the string is "a2cb2de2fGg3h".

Suppose you are given a string "AAAbbbbbbbbbbbb", the compressed output representation of the string is "A3b12".

In your program, you should take as input the string to be compressed. You can assume that the user provides the string input that consists of only small and capital letters [a-z, A-Z]. The output should be the compressed string. You should print the compressed string with a meaningful message.

You can include only `stdio.h` and `stdlib.h` libraries.