Huffman Encoding

1. You are a spy who has uncovered an enemy message, you know that they are using Huffman encoding to encrypt their message, with the following distributions:

A = 20%
C = 5%
E = 35%
K = 10%
N = 25%
T = 5%

Through another spy, you have learned that the enemy has encoded the letter 'c' as 0011 and 'n' as 10.

Decode the following message:
0100100010010011000010010000101110

RLE

1. Encode the following strings using RLE:
   i) 0
   ii) 1111000000110100000000
   iii) 11

2. Decode the following strings (which were compressed) using RLE:
   i) 1100010010011111
   ii) 011

3. Is it possible for an encoded RLE string to end in '0'?