

## **Question 1**

Training Error P=3: 0.01349862258953168  
Testing Error P=3: 0.051451187335092345

Training Error P=4: 0.013223140495867768  
Testing Error P=4: 0.03825857519788918

Training Error P=5: 0.01046831955922865  
Testing Error P=5: 0.07387862796833773

## **Question 2:**

Training Error P=3: 0.011294765840220386  
Testing Error P=3: 0.05804749340369393

Training Error P=4: 0.011019283746556474  
Testing Error P=4: 0.03562005277044855

Training Error P=5: 0.01046831955922865  
Testing Error P=5: 0.07387862796833773

## **Question 3:**

Top 2 Substrings: [('TAGQE', 3573), ('DTAGQ', 5065)]