Chemguide - questions

PROTEINS: HYDROLYSIS

1. Amides like ethanamide, CH₃CONH₂, contain exactly the same -CONH- group as there is in peptide chains, including proteins. Amides can be hydrolysed by heating with an acid such as hydrochloric acid. In the case of ethanamide the two products would be CH₃COOH and NH₄⁺.

Draw the structures of the products if you heated the following peptide chains with hydrochloric acid.

a)
$$\begin{array}{cccc} \text{CH}_3 & \text{H H} \\ & & | & | & | \\ & \text{NH}_2\text{-CH-C-N-CH-COOH} \\ & & | & | \\ & & \text{O} \end{array}$$