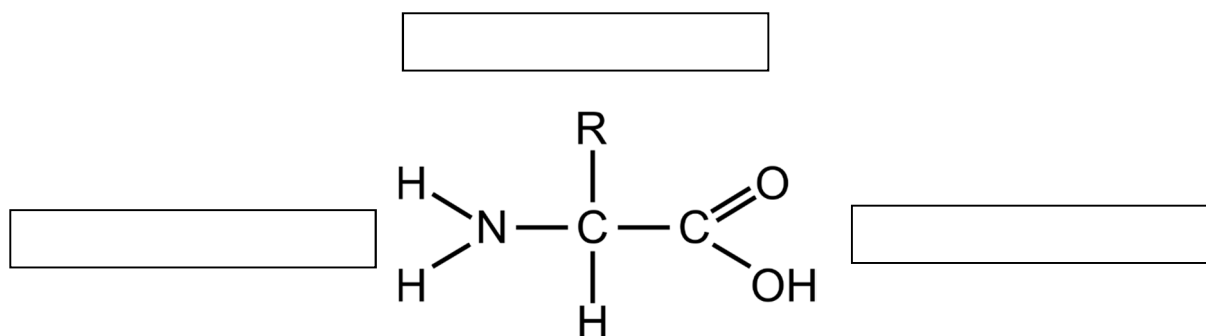


QC3 – Amino Acids

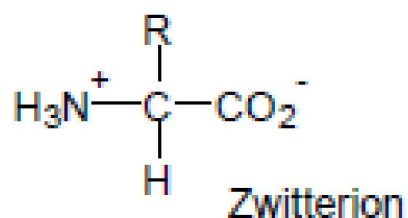
1. Name and label the three functional groups in the general structure of an amino acid:



2. Which functional group is different on every amino acid and how many naturally occurring amino acids are there?
3. Explain what is meant by 'an amino acid is amphoteric'.
4. Which reaction is required to break a peptide bond?

5. Draw the reaction between two glycine molecules, labelling the bond formed:

6. This is the general structure of a zwitterion:



Describe how the structure of a zwitterion would change if the solution was acidified with dilute hydrochloric acid.

7. Give the systematic name for this amino acid.

