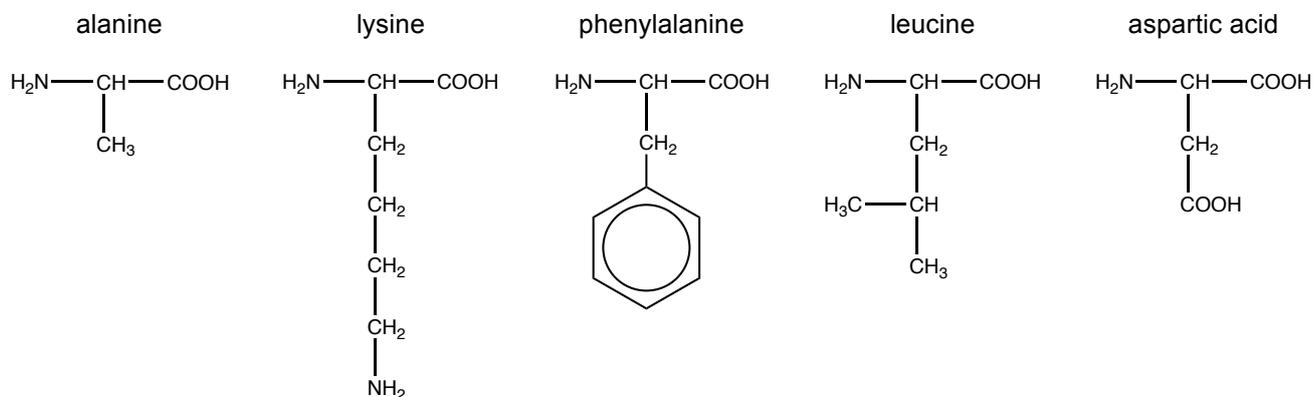




The structure of some amino acids are shown:



1 Draw the structure of the species formed from these amino acids at the pH shown.

alanine
in pH 7 solution

lysine
in pH 2 solution

leucine
in pH 12 solution

aspartic acid
in pH 12 solution

2 Give the IUPAC name for leucine.

3 Draw the structure of the two possible dipeptides formed when alanine combines with phenylalanine.

4 Alanine has a melting point of 258°C. This is considerably higher than amines or carboxylic acids with similar relative molecular mass. Explain why the melting point of alanine is somewhat higher.

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