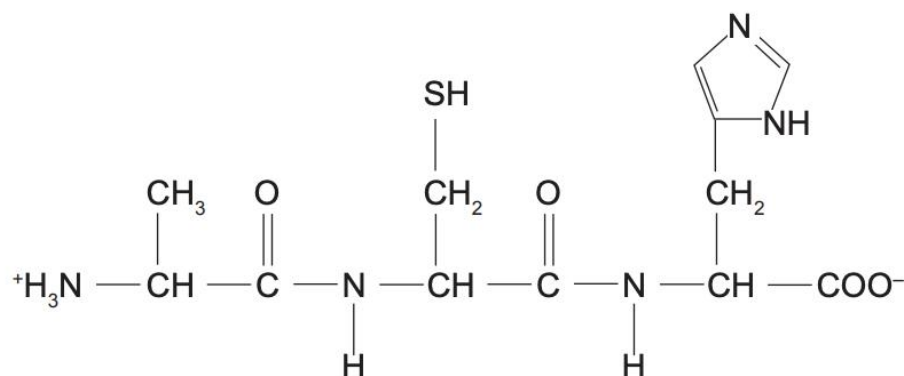


Question 36

(11 marks)

Condensation reactions will take place between different α -amino acids and results in them being joined by peptide bonds. Structures produced by two α -amino acids are called dipeptides, while those produced by three are called tripeptides.

(a) Below is the structure of a particular tripeptide.



(i) Circle the peptide bonds on the structure. (2 marks)

(ii) Name the **three** α -amino acids that reacted to form this tripeptide. (3 marks)

One: _____

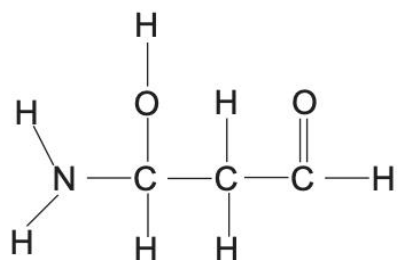
Two: _____

Three: _____

(b) Using the symbols (abbreviations) for these three α -amino acids, give **one** other polypeptide that can be formed from them. (1 mark)

Alanine is one of the simplest examples of the twenty α -amino acids found in the human body. The structure below is an isomer of alanine.

- (c) Circle and name each of the **three** functional groups on the isomer of alanine drawn below. (3 marks)



- (d) Draw a different isomer of alanine, showing clearly **all** atoms and **all** bonds. (2 marks)

Isomer of alanine structure

