

4. Hair and skin contain proteins.

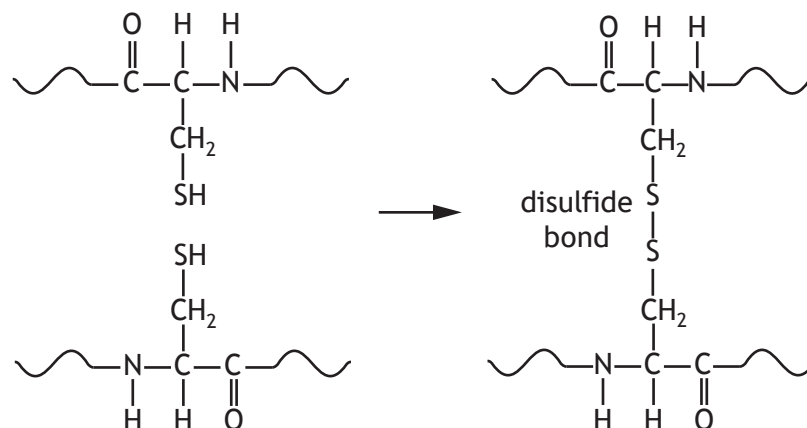
- (a) Most of the protein in human hair is keratin.

Approximately 25% of keratin is made from the amino acid cysteine.

- (i) Name the other product formed when amino acids join to form proteins such as keratin.

1

- (ii) Cysteine gives keratin a very rigid structure, as it can form strong covalent links, called disulfide bonds, between adjacent keratin fibres.



Suggest a name for the type of reaction occurring when a disulfide bond is formed.

1

- (iii) Keratin also contains smaller percentages of the essential amino acids methionine and histidine.

State what is meant by an essential amino acid.

1

[Turn over



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MARKS	DO NOT WRITE IN THIS
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