

A Level Chemistry B (Salters)
H433/01 Fundamentals of chemistry

Question Set 17

- 1 (a) (i) Enzymes catalyse the breakdown of protein molecules in the digestive system. The tertiary structure of enzymes enables the substrate to bind to them.

State the meaning of the term tertiary structure of a protein.

[1]

- 1 (b) Give **two** ways a substrate can bind to an enzyme.

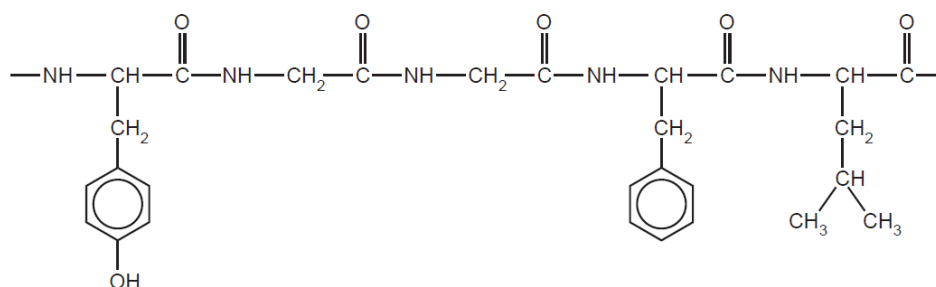
1

2

[1]

- 1 (c) (i) Some students hydrolyse a protein in the laboratory by refluxing it with moderately concentrated hydrochloric acid.

Circle **all** the chiral centres in the section of protein shown below.



[1]

- 1 (c) (ii) Give the organic products of the complete hydrolysis of this protein section with hydrochloric acid.

[4]

- 1 (d)* The students use paper chromatography to confirm that the products of hydrolysis are those in part (c)(ii).

Describe how the students would **develop** and **analyse** the chromatogram to identify the products of hydrolysis.

You may include a diagram in your answer.

[6]

Total Marks for Question Set 17: 13



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