B1.2 Proteins (HL)

What the Cell · DP Biology · note-taking sheet · HL statements B1.2.6–12

Name _____ **Date** _____

How to use this sheet: go through the slides and videos with it, then close them and write from memory. Use your own words and add page numbers from the book (pp. 210–222) where you want more detail.

Guiding questions. How does the order of amino acids produce such a variety of protein forms and functions? How do chemical and physical conditions affect protein molecules?

B1.2.6–8 R-groups, primary and secondary structure

R-group	Properties
Non-polar	
Polar	
Acidic	
Basic	

Why does the sequence determine the shape? Sketch an alpha helix and a beta sheet, showing the hydrogen bonds.

B1.2.9–10 Tertiary structure

Bond	Formed between	Broken by
Hydrogen		
Ionic		
Disulfide		
Hydrophobic		

Where do hydrophobic and hydrophilic amino acids go in a soluble protein, and in a membrane protein?

B1.2.11–12 Quaternary structure, form and function

	Insulin	**Collagen**	**Haemoglobin**
Chains			
Conjugated?			
Globular or fibrous			
Form suits function because			

Before you finish

Tick the ones you can explain without notes. Circle anything to ask about.

☐ R-groups
☐ Primary structure
☐ Alpha helix
☐ Beta sheet
☐ Hydrogen bonds
☐ Ionic bonds
☐ Disulfide bonds
☐ Hydrophobic interactions
☐ Membrane proteins
☐ Prosthetic group
☐ Insulin
☐ Collagen