B1.2 Proteins

What the Cell · DP Biology · note-taking sheet · SL statements B1.2.1–5

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. 205–210) 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?

B1.2.1 Amino acids

Draw a generalized amino acid. Label the alpha carbon, amine group, carboxyl group, hydrogen atom and R-group.

B1.2.2 Forming dipeptides

Write the word equation. Draw a dipeptide and circle the peptide bond.

B1.2.3 Dietary requirements

Distinguish essential and non-essential amino acids. Why must a vegan diet be planned with care?

B1.2.4 Variety of peptide chains

Explain why the variety is limitless. Then calculate the number of sequences for a chain of 5 amino acids.

Protein	Function

B1.2.5 Effects of pH and temperature

Define denaturation. Explain how heat causes it, and how pH causes it.

Before you finish

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

- ☐ Drawing an amino acid
- ☐ Drawing a dipeptide
- ☐ Essential amino acids
- ☐ Limitless variety
- ☐ Examples of proteins
- ☐ Sequence and shape
- ☐ Denaturation