D1.2 Protein synthesis (HL)

What the Cell · DP Biology · note-taking sheet · HL statements D1.2.12–19

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. 625–636) where you want more detail.

Guiding questions. How does a cell turn a DNA base sequence into a chain of amino acids? What keeps protein synthesis reliable?

D1.2.12–14 Transcription and non-coding DNA

Directions of reading and building in transcription and translation. How does transcription start at the promoter?

Non-coding sequence	Role
Regulators	
Introns	
Telomeres	
rRNA and tRNA genes	

D1.2.15–16 Processing mRNA

Draw pre-mRNA becoming mature mRNA. Label exons, introns, cap and tail. Show how alternative splicing could give two proteins.

D1.2.17 Translation

Steps of initiation, and the roles of the A, P and E sites in elongation:

D1.2.18–19 After translation

Pre-proinsulin to insulin in two stages. How do proteasomes recycle proteins?

Before you finish

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

- ☐ 5′ to 3′
- ☐ Promoter
- ☐ Introns
- ☐ Telomeres
- ☐ Cap and tail
- ☐ Splicing
- ☐ Troponin T
- ☐ Initiator tRNA
- ☐ A, P and E sites
- ☐ Insulin
- ☐ Ubiquitin
- ☐ Proteasome