D3.3 Homeostasis (HL)

What the Cell · DP Biology · note-taking sheet · HL statements D3.3.7–11

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. 768–778) where you want more detail.

Guiding questions. How do humans keep internal conditions constant? Why is it useful for organisms to keep internal conditions constant?

D3.3.7–8 Excretion, filtration and reabsorption

Excretion compared with osmoregulation. Draw and label a nephron.

Ultrafiltration (three filter layers) and selective reabsorption in the proximal tubule:

D3.3.9–10 Loop of Henle and ADH

How the loop concentrates the medulla. What happens when you are dehydrated, and when you have drunk a lot.

D3.3.11 Blood supply

Blood flow to muscle, gut, brain and kidneys in sleep, wakeful rest and hard exercise, and how it is changed.

Before you finish

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

- ☐ Excretion vs osmoregulation
- ☐ Ultrafiltration
- ☐ Podocytes
- ☐ Proximal tubule
- ☐ Loop of Henle
- ☐ ADH
- ☐ Aquaporins
- ☐ Vasodilation