

GCSE Biology B (Twenty First Century Science)
J257/04 Depth in biology (Higher Tier)

Question Set 18

1*

Alex has not had a drink of water for some time. This means there is less water in his blood.

Describe how Alex's body detects and responds to this, and how his blood and urine are affected by the body's response.

[6]

High plasma concentration due to low water level is detected by the brain and more ADH is released from the pituitary gland. ADH makes the distal convoluted tubule and collecting ducts more permeable to water. This allows more water to be reabsorbed by the kidneys. As a result, more concentrated urine is produced and plasma concentration is brought down back to normal. This is a negative feedback mechanism.

Total Marks for Question Set 18: 6

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