

A-Level Biology

Name: _____ Score: _____

1. Homeostasis is:

- ☐ keeping internal conditions steady despite changes outside
- ☐ making the body match the outside temperature
- ☐ growing new cells
- ☐ breaking down food

2. The nephron is:

- ☐ the tiny tube that is the kidney's functional unit
- ☐ the outer capsule of the kidney
- ☐ a hormone
- ☐ the tube to the bladder

3. The hormone that controls water reabsorption in the kidney is _____.

4. When blood glucose is high, insulin:

- ☐ makes liver and muscle cells take in glucose and store it as glycogen
- ☐ breaks glycogen into glucose
- ☐ raises blood glucose
- ☐ has no effect

5. Guard cells close the stomata to reduce water loss when the plant is short of water.

- ☐ True ☐ False

6. Removing the amino group from excess amino acids in the liver is called _____.

7. Ultrafiltration happens at the _____ — the knot of capillaries inside the Bowman's capsule.

8. Which part of the brain detects the water potential of the blood?

- ☐ the hypothalamus
- ☐ the collecting duct
- ☐ the glomerulus

☐ the ureter

9. When blood glucose is low, glucagon:

☐ makes liver cells break glycogen back into glucose, raising the level

☐ stores glucose as glycogen

☐ lowers blood glucose

☐ splits water

10. The hormone that LOWERS blood glucose, by making cells store it as glycogen, is _____.

A-Level Biology

1. keeping internal conditions steady despite changes outside

Homeostasis keeps internal conditions (temperature, water, glucose) steady so cells work well.

2. the tiny tube that is the kidney's functional unit

Each kidney has about a million nephrons; each makes urine by filtration and reabsorption.

3. ADH

ADH makes the collecting duct more permeable to water.

4. makes liver and muscle cells take in glucose and store it as glycogen

Insulin lowers blood glucose by promoting uptake and storage as glycogen.

5. True

Closing the stomata is how a plant conserves water — part of homeostasis in plants.

6. deamination

It produces ammonia, which the liver converts to urea for the kidneys to excrete.

7. glomerulus

High blood pressure in the glomerulus forces small molecules out into the capsule.

8. the hypothalamus

The hypothalamus monitors blood water potential and triggers ADH release from the pituitary.

9. makes liver cells break glycogen back into glucose, raising the level

Glucagon raises blood glucose by breaking down glycogen into glucose in the liver.

10. insulin

Insulin lowers blood glucose; its opposite, glucagon, raises it.