Non-Negotiables: Biology Paper 2

1. What is homeostasis?
Answer:
The regulation of internal conditions to maintain a stable environment in the body.

2. Give one example of a condition controlled by homeostasis.
Answer:
Body temperature (also: blood glucose level or water content).

3. Which organ controls body temperature?
Answer:
The brain (specifically the hypothalamus).

4. What happens when the body gets too hot?
Answer:
Sweating occurs and blood vessels in the skin dilate. #

5. What does insulin do?
Answer:
It lowers blood glucose levels by helping cells take in glucose.

6. What is a reflex action?
Answer:
A rapid and automatic response to a stimulus.

7. Name the pathway of a reflex arc.
Answer:
Receptor → sensory neurone → relay neurone → motor neurone → effector.

8. What is the role of receptors?
Answer:
To detect changes in the environment (stimuli).

9. Which hormone controls the menstrual cycle?
Answer:
Oestrogen (also progesterone, FSH, or LH).

10. What is the function of oestrogen?
Answer:
It causes the womb lining to build up.

11. Where are sperm produced?
Answer:
In the testes.

12. What is a population?
Answer:
All the organisms of one species in a habitat.

13. Give one biotic factor affecting organisms.
Answer:
Predators (also: competition, disease, food availability).

14. What is photosynthesis used for in ecosystems?
Answer:
To produce food (glucose) and energy for plants, forming the base of food chains.

15. What is natural selection?
Answer:
The process where organisms with favourable traits survive and reproduce more successfully.