

## B1 - Nerves and Hormones Quiz

1. Why must body temperature be kept within a narrow range?

*So that enzymes and body reactions work well.*

2. Describe IVF.

*Eggs are collected from the ovaries. The eggs are fertilised with sperm; a ball of cells, or embryo forms which is inserted into the woman's uterus.*

3. Suggest why IVF clinics are asked to reduce multiple births.

*Babies are born with low birth weight; multiple births increase the risk of harm to mother and baby (i.e. miscarriages or premature birth).*

4. How is information passed across a synapse?

*By a chemical transmitter*

5. Apart from using insulin, how else can diabetes sufferer reduce their blood glucose?

*Controlled diet, exercise, pancreas transplant*

6. Why does the blood glucose concentration decrease during a race?

*Used during respiration to provide energy for the race.*

7. What do anabolic steroids do?

*They increase the growth of muscle.*

8. Why are anabolic steroids banned in sport?

*To ensure fairness during competition; anabolic steroids have harmful side effects.*

9. Name one plant hormone.

*Auxin*

10. List the main features of asexual reproduction.

*No fertilisation, only one parent, no mixing of genetic material, no genetic variation (only clones).*

11. Give one advantages of using tissue cultures rather than cuttings for plant reproduction.

*Less damage to parent plant and many more plants can be grown/produced from one parent plant using tissue cultures.*

12. Describe the pathway taken by the nerve impulse in the blink reflex.

*From light sensitive cells to sensory neurone to the brain/CNS to the motor neurone to the eye lid muscle (effector).*

13. Other than plant reproduction, give a use for plant hormones.

*Weed killer*

14. What is a hormone?

*Chemical messenger*

15. Which organ produces hormones?

*A gland*

16. How are hormones transported inside the body?

*Blood*

17. Describe how the hormones FSH, oestrogen and LH are involved in the control of the menstrual cycle.

*FSH stimulates oestrogen production and egg maturation; oestrogen then inhibits further FSH production, stimulates LH production as well as the build-up of the uterus lining; LH stimulates ovulation.*

18. Give two differences between a reflex and a hormone controlled action.

*A reflex is faster and happens over a shorter period of time; reflex involves impulses but hormones involves chemicals; hormones involves circulatory system, reflex involves nervous system.*

19. Which word describes a change in the environment?

*Stimulus*

20. Give one medical use of thalidomide today.

*Sleeping pill; treating leprosy*

21. Which two hormones are used in IVF treatment?

*FSH and LH*

22. Name two hormones involved in the menstrual cycle.

*Oestrogen, progesterone, LH, FSH*

23. Explain how hormones used in contraceptive pills can prevent conception.

*FSH production is inhibited so that the egg does not mature.*

24. Name the gland that produces FSH.

*Pituitary*

25. Name the gland that produces oestrogen.

*Ovaries*

26. Give two disadvantages of IVF treatment.

*Low success rate, expensive, risk of multiple births, stressful (emotional)*

27. Describe what happens at a synapse when an impulse arrives.

*Chemicals/transmitters diffuse across the gap so that the impulse can pass from one neurone to the next.*

28. Why is it dangerous when information from the skin does not arrive at the brain?

*The stimulus cannot be felt so there is a risk of serious or permanent harm. (E.g. skin burns)*

29. Name three conditions which are controlled inside our body.

*Heart rate, blood pressure, blood glucose, water, minerals/salts, temperature*

30. Why is it difficult to give up an addictive drug?

*An addictive drug alters the body chemistry so the user craves the drug. Withdrawal symptoms start once the user stops taking the drug.*

31. Why do some oral contraceptives contain oestrogen?

*Because oestrogen inhibits FSH production; without FSH the egg does not mature and ovulation does not happen.*

32. Why do you sweat more when you exercise?

*Exercise raises the body temperature/makes you feel hot and sweating helps to cool down the body.*

33. Why do you need to drink more water when you exercise?

*A lot of water is lost during sweating which needs to be replaced to prevent dehydration.*

34. What are the disadvantages of using contraceptive hormones?

*Prolonged use might lead to infertility; might cause weight gain, mood swings, breast cancer or headaches; increase in STDs as condoms are not used*

35. Why does a blockage of an oviduct/fallopian tube cause infertility?

*Egg and sperm cannot meet.*

36. Describe how changes in the uterus lining adapt it for its function if an egg is fertilised.

*The lining builds so that a zygote could implant- the surface area increases so there is a better chance that the zygote attaches; increase in blood vessels to provide nutrients for the zygote; it thickens to form the placenta*

37. Which organ controls the amount of water in the body?

*Kidney*

38. How does your body control the rate at which your kidney re-absorbs water?

*With ADH from the pituitary gland*