

Key Knowledge for B5- Homeostasis + Response

Nervous System	
1. What is the central nervous system (CNS) made up of?	Brain and spinal cord
2. What is the role of the nervous system?	To carry messages in the form of electrical impulses around the body.
3. How are neurones adapted to their function?	<ul style="list-style-type: none"> • Neurones can carry electrical impulses • Neurones are long • Neurones are insulated • Neurones are branched
4. What are the stages in a nervous response?	<ol style="list-style-type: none"> 1. Stimulus 2. Receptor 3. Sensory neurone 4. Co-ordinator 5. Motor neurone 6. Effector
5. What is a reflex action?	A rapid and automatic nervous response that by-passes the conscious parts of the brain
6. Why are reflex actions important?	Protect us from harm
7. What co-ordinates the response?	The relay neurone
8. What is a synapse?	A gap or junction between neurones (nerve cells)
9. What happens at the synapse?	<ul style="list-style-type: none"> • Chemicals are released • They diffuse across the synapse • They trigger an impulse in the next neurone

Endocrine System	
10.What is the endocrine system?	A group of glands that release hormones into the bloodstream
11.Name 6 glands	<ul style="list-style-type: none"> • Pituitary gland • Thyroid • Adrenal • Ovaries • Testis • Pancreas
12.Why is the pituitary gland called the master gland?	Produces several hormones which then, in turn, cause other glands to produce hormones
13.What are hormones?	<ul style="list-style-type: none"> • Chemical messengers • Travel in the bloodstream to target organs
14.How is the endocrine system different than the nervous system?	<p>The endocrine system is:</p> <ul style="list-style-type: none"> • slower to act • longer-lasting

Control of Blood Glucose	
15.Which organ monitors and controls your blood glucose concentration?	The pancreas
16.Which hormone is released if there is too much glucose in the blood?	Insulin
17.What effect does insulin have?	Causes glucose to be stored in the muscle & liver cells as glycogen
18.Which type of diabetes is inherited?	Type 1
19.Which type of diabetes is caused by lifestyle?	Type 2
20.What is wrong with a person if they have type 1 diabetes?	They are not producing enough insulin
21.How is type 1 diabetes treated?	Insulin injections
22.What is wrong with a person if they have type 2 diabetes?	Muscle/ liver cells are not responding to the insulin
23.How is type 2 diabetes treated?	Exercise and low sugar diet

Menstrual Cycle

24. What is homeostasis?	<ul style="list-style-type: none">• The maintenance of constant internal conditions
25. In the menstrual cycle how often is an egg released?	<ul style="list-style-type: none">• Every 28 days
26. What is the release of an egg called?	<ul style="list-style-type: none">• Ovulation
27. What are the 4 hormones involved in the menstrual cycle?	<ul style="list-style-type: none">• FSH• LH• Oestrogen• Progesterone
28. Which gland produces FSH and LH?	<ul style="list-style-type: none">• Pituitary gland
29. Which gland produces oestrogen and progesterone?	<ul style="list-style-type: none">• Ovaries
30. What is the role of FSH?	<ul style="list-style-type: none">• Causes egg to mature
31. What is the role of oestrogen?	<ul style="list-style-type: none">• Causes the wall of the uterus to build up
32. What is the role of LH?	<ul style="list-style-type: none">• Causes an egg to be released (ovulation)
33. What is the role of progesterone?	<ul style="list-style-type: none">• Maintains the uterus lining
34. What is the main reproductive hormone in men and what is its function?	<ul style="list-style-type: none">• Testosterone• Stimulates sperm production

Contraception

35.How do oral contraceptives work?	<ul style="list-style-type: none">• Contain oestrogen/ progesterone• Inhibit FSH• No eggs mature
36.How do injections, implant or skin patch work?	<ul style="list-style-type: none">• Progesterone released over a long period of time• Inhibits FSH and LH• No eggs mature, no eggs released
37.How do barrier methods work?	<ul style="list-style-type: none">• Condoms prevent the sperm reaching an egg
38.How does an intrauterine device work?	<ul style="list-style-type: none">• Prevents the implantation of an embryo
39.How does a spermicide work?	<ul style="list-style-type: none">• Kill sperm
40.How does abstaining work?	<ul style="list-style-type: none">• Don't have sex
41.How does sterilisation work?	<ul style="list-style-type: none">• Female- fallopian tubes are tied- egg can't get through• Male- Sperm ducts are tied- sperm can't get through