What is homeostasis?

**ANS** The maintenance of the body’s internal environment despite changes to the external environment.

List 3 things that must remain constant in the body

**ANS** Temperature, water balance & blood sugar

What are the 2 main functions of the kidneys?

**ANS** Filtration of the blood and reabsorption of useful substances

What are the four parts of a

 nephron called?

**ANS** Glomerulus, Bowman’s capsule, tubule and collecting duct.

What process occurs in the glomerulus?

**ANS** Filtration

What is the function of the nephron tubule and surrounding blood capillaries?

**ANS** To reabsorb useful substances eg Glucose and amino acids

What is the name of the hormone that affects water reabsorption in the kidneys?

**ANS ADH**

What affect does ADH have on the kidney?

**ANS** It causes the reabsorption of water in the tubules back to the blood.

What is the function of the collecting duct?

**ANS** To transport urine away from the nephrons

If your blood has a decrease in the water concentration what happens to the concentration of ADH?

**ANS** An increased concentration of ADH

What affect does a high level of ADH have on the volume and concentration of urine?

**ANS** Small volume of concentrated urine.

What disease is caused by not being able to regulate your blood sugar?

**ANS** Diabetes

What hormone is produced when there is excess glucose in the blood?

**ANS** insulin

Where is insulin produced?

**ANS** Pancreas

Which part of the body detects the temperature?

**ANS** hypothalamus

Which mechanisms prevent the body from overheating?

**ANS** Sweating and vasodilation

How does vasodilation lower body temperature?

**ANS** Increased flow of blood to surface of skin to lose heat.

How does sweating lower body temperature?

**ANS** Heat energy is used to convert water in sweat to water vapour.

Which mechanisms prevent the body from overcooling?

**ANS** Vasoconstriction, shivering contraction of hair erector muscles

How does vasoconstriction raise body temperature?

**ANS** Decreased flow of blood to surface of skin to prevent loss of heat.

How does shivering raise body temperature?

**ANS** Heat energy is produced when skeletal muscles contract and relax rapidly

Name the two parts to a virus.

**ANS** protein coat + DNA or RNA

When a virus attaches to host cell what happens next?

**ANS** The DNA enters the host cell and takes over the cell's resources.

After the viral DNA has inserted itself into the host cell what happens?

**ANS** The virus replicates

What happens at release of the viruses from the host cell?

**ANS** The host cell ruptures and the viruses leave.

What substance do lymphocytes produce to help destroy invaders?

**ANS** a specific antibody

What which blood cell is involved in phagocytosis?

**ANS** phagocyte

What is the function of lysosomes in phagocytosis?

**ANS** contains the digestive enzymes that will digest the engulfed invader

List the 4 blood groups

**ANS** A, B, AB & O

 How is blood group determined?

**ANS** By the antigens on the surface of red blood cells

Which blood group is described as the universal donor& why?

**ANS** O because it can be given to any blood type

Which blood group is described as the universal recipient & why?

**ANS** AB because it can receive any blood type

What is the function of the cerebrum?

**ANS** memory / sight / sound

What is the function of the cerebellum?

**ANS** Balance and co-ordination

What is the function of the medulla?

**ANS** To control heart rate and breathing

Name the three parts of the nervous system.

**ANS** brain, spinal cord & nerves

List the two functions of the nerves.

**ANS** To carry information from the nerves to the CNS and from the CNS to the muscles

List the 3 nerves in a reflex arc.

**ANS**  sensory nerve, relay nerve and motor nerve

Which nerve in the reflex arc carries information from the senses to the spinal cord?

**ANS**  Sensory nerve

Which nerve in the reflex arc carries information from the spinal cord to the muscles?

**ANS motor** nerve