CLASS X: BIOLOGY Chapter: HOMEOSTASIS SLO # 11.4.7

Q. Discuss the role of kidney in Osmo-regulation:

Osmo-regulatory Function of Kidney:

The **"Osmo-regulation**" is the control of water contents and other ingredients (like salts and acids etc) in the blood to maintain constant or nearly constant water potential in the body.

The kidneys also play an important function of Osmo-regulation. If the blood contains too much water, a small amount of water is reabsorbed from the renal tubules, while more water is left to enter into the bladder. In this manner a large volume of dilute urine produced, and the human body gets rid of extra water and unnecessary salts and uric acid.

If the body is much concentrated, more water is reabsorbed into the blood from kidney tubules and small quantity of concentrated urine is produced.

The message for drinking more water is sent to **hypothalamus**, the thirst center in the brain, to restore the blood consistency to its normal concentration.

The above mentioned regulatory process is collectively called **Osmo-regulation**, because they regulate the osmotic strength of the blood. The kidney also regulates the acid base balance of the body.