|  |
| --- |
| Name : Arbaz Khan |
| ID : 16033 |
| Depart: DPT 2nd . Section: A |
| Paper : Physiology Exam : Mid Term |
| Examiner : Dr. Sara Naeem  |

Q no 1. Explain Homeostatic Mechanism regarding the control of calcium in the body with reference to parathyroid hormone and Calcitonin.

Ans:

 Calcium metabolism or calcium homeostasis is the mechanism by which the body maintain adequate calcium level….

Calcium release from bone is regulated by parathyroid hormone. Calcitonin stimulates incorporation of calcium in bone….

Calcium regulation: parathyroid hormone regulates the level of calcium in the blood.

**Control of Calcium level in the body:**

 Calcitonin is involved in helping to regulate level of calcium and phosphate in the blood opposing the action of parathyroid hormone…

**Calcitonin reduce calcium level in the blood by two main mechanism:**

 It inhabits the activity of osteoclasts, which are the cells responsible for breaking down bone.

**Reference to Parathyroid Hormone:**

Parathyroid hormone regulates calcium level in the blood, largely by increasing the levels when they are too low. It does this trough it’s action on the kidneys, bones and intestine:

 Bones:

 Parathyroid hormone stimulates the release of calcium from large calcium stores in the bones into the blood stream.

**Parathyroid Hormone Maintain Homeostasis:**

Parathyroid hormone in maintaining blood calcium homeostasis.

Parathyroid hormone increases blood calcium levels when they drop too low. Conversely, calcitonin, which is released from the thyroid gland, decreases blood calcium levels when they become too high.

**Q no:2. Give clinical difference between hypo and hyper thyrodism.**

 The most common difference between the two diseases relates to hormone level.

**Hypothyroidism:**

Hypothyroidism leads to a decrease in hormones.

**Hyperthyroidism:**

Hyperthyroidism leads to an increase in Hormone production…
However, it’s not uncommon to have an over active thyroid and then an under active thyroid, or vice versa.

**Q no:3. Classify Enzyme and there function in Digestion.**

Ans:

 Digestive enzyme are classified based on their target substrates:

 **Lipases:**

 Lipases split fatty acids of fats and oils.

 **Protease:**

 Proteases and peptidases splits proteins into small peptides and amino acids.

 **Amylases:**

 Amylases split carbohydrates such as starch and sugar into simple sugar such as glucose.

 **The role of Enzymes in Digestion:**

 Role of enzymes in the digestive system.

 Chemical digestion could not take place without the help of digestive enzymes. An enzyme is a protein that speeds up chemical reaction in the body. Digestive enzymes speed up chemical reaction that breakdown large food molecules into small molecules.

 **Digestive Enzyme there Functions:**

* Amylase produced in the mouth. It helps breakdown large starch molecules into smaller sugar molecules.
* Pepsin, produced in the stomach…
* Trypsin, produced in the pancreas…
* Pancreatic lipase, produced in the pancreas…
* Deoxyribonuclease and ribonuclease, produced in the pancreas…

**Enzyme Classification:**

According to International Union of Biochemicts (IUB),

Enzymes are divided into 6 functional classes and are classified based on the type of reaction in which they are used to catalyze.

The 6 types of enzymes are oxidoreductases, hydrolases, transferases, lyases, isomerases and lygases.