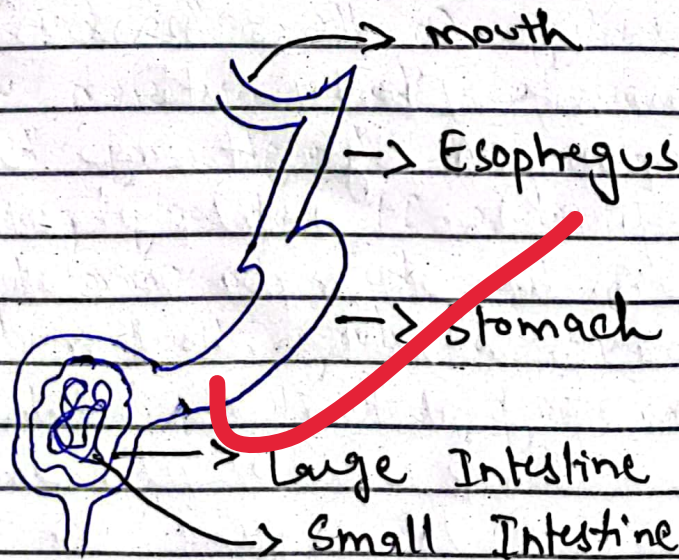


Q: How digestion of food take place in human body?

ANS: DIGESTIVE SYSTEM:

It is mainly responsible for breakdown of large particles into small particles. Large particles includes protein, fats and carbohydrates. Small particles includes amino acid, glucose and fatty acid.

COMPONENT OF DIGESTIVE SYSTEM:



1 - MOUTH:

Digestion process starts from mouth. In mouth we have specialized organs.

-> TEETH:

It is mainly responsible for cutting food due to that we mechanically digest food.

## → SALIVARY GLAND :

It consist of 3 pairs in our mouth. It is responsible to release saliva, ~~and~~ saliva consist of water due to that water food get lubricated. It also consist of sodium bicarbonate. It also contain enzymes called Amylase. Amylase is responsible for breakdown of starch into maltose.

## 2- ESOPHAGUS :

It provide passage to pass the bolus. Bolus is a ball like structure of grinded food.

## 3- STOMACH :

It is a bag like J shape organ which is surrounded by three layers. In stomach there is gastric gland which releases gastric juice. Gastric juice consist of mucus which responsible for the protection of inner most layer. It also consist HCL which is responsible for killing micro organism. It consist of pepsinogens (active form). Active form of pepsinogens are pepsin which is responsible for converting protein into polypeptides. Only 10% of the digestion take place upto stomach.

## 4. SMALL INTESTINE :

Remaining 90% of the digestion take place in small intestine. There are three parts in small intestine.

- i - Duodenum
- ii - Jejunum
- iii - Ileum

### i - DUODENUM :

It releases Enterokinase -

Two things help Duodenum.

→ Pancreas                      → Liver

### → PANCREAS :

It releases pancreatic juice which consist of Amylase, Sodium bicarbonate, lipase and Trypsinogen.

Amylase is responsible to convert starch into maltose. Sodium bicarbonate is responsible to neutralized the nature of chyme. Lipase is responsible to convert fat into fatty acid and Trypsinogen first convert into trypsin which is responsible for converting protein into polypeptides.

### → LIVER :

It is responsible to convert ~~fat~~ fat into fatty acid.

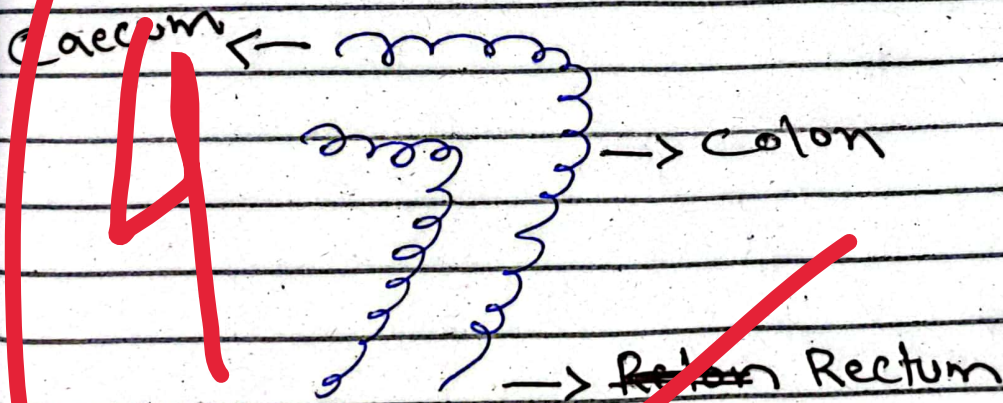
## ii - JEJUNUM :

It releases intestinal juice which consist of Amino peptidase, Trypsin, maltase, lipase and lactase. Amino peptidase convert protein into dipeptides. Trypsin convert dipeptides into Amino acid. Lipase convert fat into fatty acid. Maltase convert maltose into glucose. Lactase convert lactose into glucose.

## iii - ILLIUM :

Illum consist of villi which absorb minerals, water etc and passed it to the body through capillaries.

## 5. LARGE INTESTINE :



In caecum some amount of water absorb. In colon some amount of water and mineral reabsorb. Rectum is a temporary storage of waste. Then the body remove it in the form of faeces through anus. Complete digestion took 36 hours.