

**Aim:** Study of the digestive system and organs with the help of charts, models, and specimens.

**Introduction:** The digestive system is complex and intricately organized to break down, absorb, and assimilate nutrients from ingested food. It comprises various organs and systems that work collaboratively to ensure the effective processing of food.

### **1. Mouth:**

**Functions:** Mechanical breakdown of food through mastication (chewing); initiation of chemical digestion with salivary enzymes, including amylase, breaking down carbohydrates.

### **2. Salivary Glands:**

**Functions:** Secretion of saliva, containing enzymes, to moisten and begin the digestion of food in the mouth.

### **3. Pharynx:**

**Functions:** A muscular tube that serves as a passage for food and air; facilitates food movement from the mouth to the esophagus.

### **4. Esophagus:**

**Functions:** A muscular tube propels food from the pharynx to the stomach through peristaltic contractions.

### **5. Stomach:**

**Functions:** Mechanical churning and mixing of food; secretion of gastric juices containing hydrochloric acid and enzymes for protein digestion; temporary food storage.

### **6. Liver:**

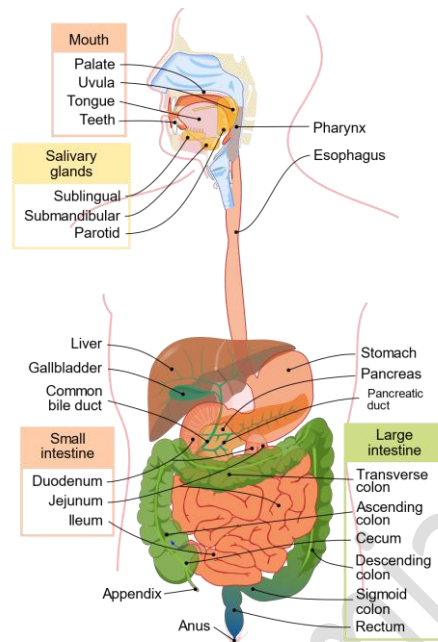
**Functions:** Bile production for emulsifying fats; metabolism of nutrients; detoxification of harmful substances; storage of glycogen, vitamins, and minerals.

### **7. Gallbladder:**

**Functions:** Storage and release of concentrated bile produced by the liver to aid in fat digestion in the small intestine.

### **8. Pancreas:**

**Functions:** Secretion of pancreatic juices containing enzymes (lipase, amylase, proteases) into the small intestine to digest fats, carbohydrates, and proteins.



### 9. Small Intestine:

**Functions:** Primary site for nutrient absorption, including amino acids, fatty acids, and monosaccharides; further digestion of nutrients by enzymes.

### 10. Large Intestine (Colon):

**Functions:** Absorption of water and electrolytes; formation and storage of feces; houses gut microbiota aiding in fermentation of indigestible carbohydrates.

### 11. Rectum:

**Functions:** Storage of feces before elimination.

### 12. Anus:

**Functions:** Elimination of feces from the body.

The digestive system's coordinated efforts ensure the extraction of nutrients essential for energy, growth, and maintenance of bodily functions. Each organ plays a unique role; any disruption in this intricate system can impact overall health and well-being.