



# ORGAN SYSTEM



## Concepts Covered

- Digestive system.
- Nutrients and balanced diet.
- Disorders of Digestive system.

## Digestive System

Digestive system begins at the mouth where food is mixed with saliva to make it soft and it is cut and ground into small pieces.

### Buccal cavity

Buccal cavity, commonly known as the mouth, acts as an entrance to the digestive system. It consists of lips, cheeks, teeth, gums and tongue.

### Tongue

- It is a Muscular organ that helps to move the food in the mouth and taste it.
- It has taste buds that help to identify four tastes salt, sweet sour and bitter.
- The front part of the tongue could taste salt & sweet.
- The middle part of the tongue could feel sour.
- The innermost part of the tongue could feel bitter taste.

### Teeth

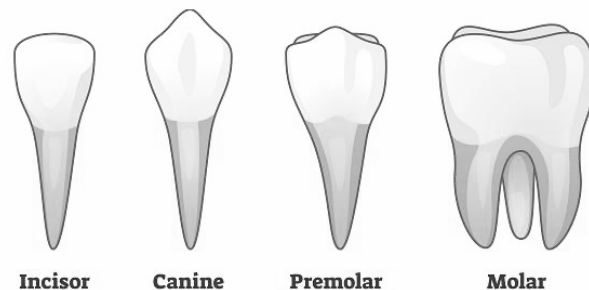
Teeth give shape to the face and help to break down food

Total teeth -32

Upper jaw-16

Lower jaw-16

- Incisors – 4
- Canines – 2
- Premolar – 4
- Molar – 6



Incisor

Canine

Premolar

Molar

### Esophagus

Food then goes into the stomach via Esophagus. The esophagus is also known as food pipe.

### Stomach

The stomach secretes HCl and pepsin. These juices mix with food and break it down further

Partially digested food (also known as chyme) then moves into the small intestine. Digestive juices from pancreas, liver and gall-bladder mix with chyme here to break it down further.

### Small intestine

Food particles then move into lower segments of the small intestine. Tiny finger like structures are present on the lining of the small intestine. These structures are called villi of the small intestine. Villi absorb nutrients from digested food into the blood. Digestion of food ends at the small intestine.

### Large intestine

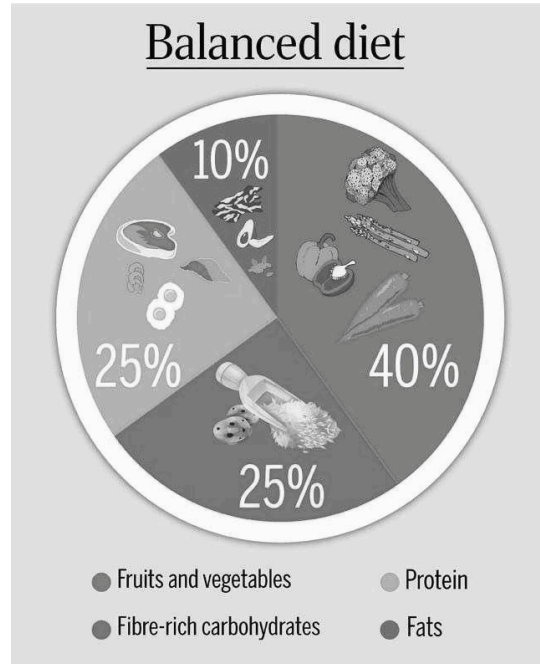
- The digested food is absorbed by the blood and circulated to every cell of the body.
- Undigested food goes in to the large intestine. Water is absorbed here.
- There after solid wasted thrown out from the anus.

### Balanced diet

The food that contains all the nutrients water and roughage in the right amount is known as balanced diet.

### Nutrients

- Food Rich in Carbohydrates and fats
- Bread, Sugar, Potatoes, Rice ,Oil
- Carbohydrates and fats give us energy to do work. They are called energy giving food.
- Food Rich in protein
- Cheese, Ghee, Chicken, Fish ,Eggs ,Milk, Cashew nut, Grams Beans.
- Proteins help our body to grow. They are called body building food.
- Food Rich in Vitamins and Minerals
- Fruits Vegetables
- Vitamins and Minerals help our body to remain healthy and protect us from disease are called protective food.



### Malnutrition

People who do not eat enough food suffer from malnutrition. Malnutrition leads to deficiency diseases.

#### Example:

**Marasmus** – due to the deficiency of carbohydrates

**Kwashiorkor** – due to deficiency of protein

#### Marasmus

The disease occurs due to the deficiency of protein and carbohydrates in the diet of a child below age of one.

Symptoms of this disease

- Stunted growth
- Wrinkled skin
- Frequent diarrhoea

This disease can be cured by giving diet rich in carbohydrates.

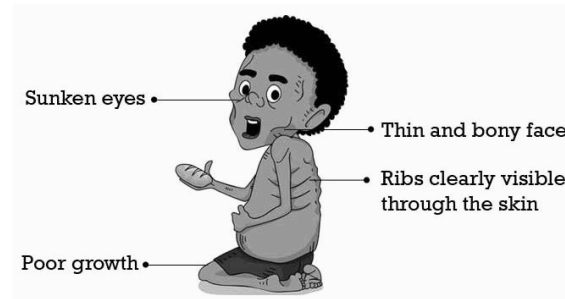
**Kwashiorkor**

This disease also occurs due to the deficiency of carbohydrates and proteins in the diet

Symptoms

- Swollen belly
- Low appetite

Such children should be fed pulses, eggs, skimmed milk, porridge etc.



### Glucose

Glucose is a kind of sugar which gives instant energy to the people who suffer from weakness and diseases.

### ORS

Oral Rehydration solution is prepared using following method.

Take 1 liter of clean boil cool water.

- Add 6 spoon of sugar and ½ tea spoon of salt.
- Add few drops of lemon juice for flavors.
- Mix well ORS is ready. This solution can be given to the person affected by diarrhea every ten minutes.



## Exercise

### OBJECTIVE TYPE QUESTIONS

- (1) What is the taste of tamarind?  
(A) Sweet (B) Sour  
(C) Salty (D) Spicy
- (2) From which part of our body do we feel the taste of any food item?  
(A) Teeth (B) Nose  
(C) Tongue (D) Stomach
- (3) What is the taste of jaggery?  
(A) Sweet (B) Salty  
(C) Sour (D) Bitter
- (4) In which of the following way, we lose water from our body?  
(A) sweating (B) Urination  
(C) Both (a) and (b) (D) None of the above
- (5) What does the term right to food means?  
(A) Meets individual dietary needs  
(B) Sufficient and nutritious food is available for everyone.  
(C) People have means to access it  
(D) All of the above
- (6) Why should we chew well and eat slowly?  
(A) We can enjoy our food for more time.  
(B) It makes food more tasty  
(C) It helps in proper digestion of food.  
(D) It helps in proper utilisation of food
- (7) Where does our food go, after we put it into the mouth and swallow it?  
(A) Liver (B) Stomach  
(C) Small Intestine (D) Pancreas
- (8) Which of the following is the source of protein?  
(A) Egg (B) Rice  
(C) Orange (D) Spinach
- (9) Digestive system consists of \_\_\_\_\_  
(A) Mouth (B) Oesophagus  
(C) Brain (D) Both (a) and (b)
- (10) How many number of premolars are present in human being?  
(A) 8 (B) 16  
(C) 32 (D) 4

## Answer Key

### OBJECTIVE TYPE QUESTIONS

- |         |          |
|---------|----------|
| (1) (B) | (6) (C)  |
| (2) (C) | (7) (B)  |
| (3) (A) | (8) (A)  |
| (4) (C) | (9) (D)  |
| (5) (D) | (10) (A) |