

# General Science

## Write note on excretory system

"Excretory system is a system in human that is responsible for the excretion/removal of waste from the body."

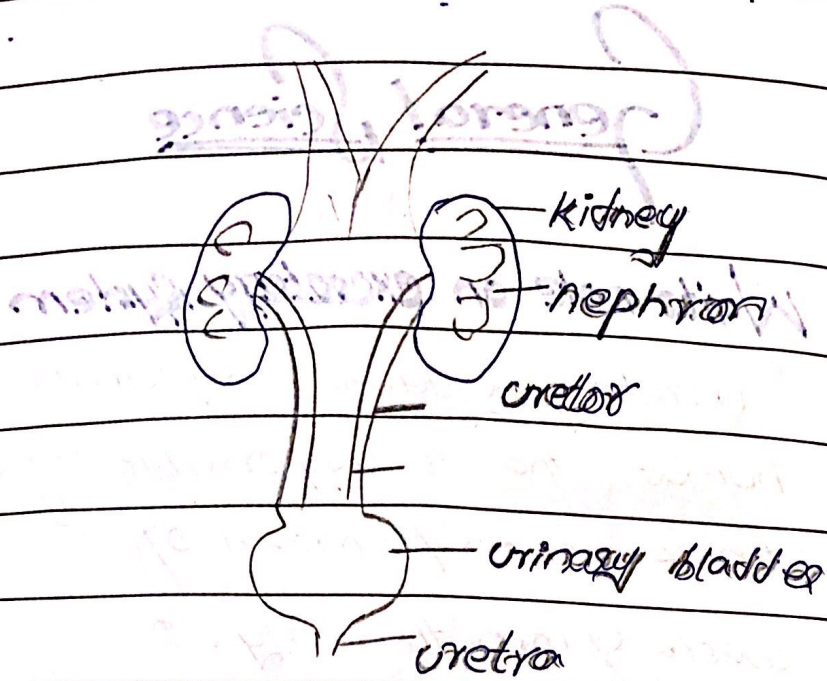
Human excretory system helps to remove nitrogenous wastes from body like extra water, salt, amino acids... Excretory system consist of **Kidney, Nephron and ureter, urinary bladder and uretra**

### Kidney

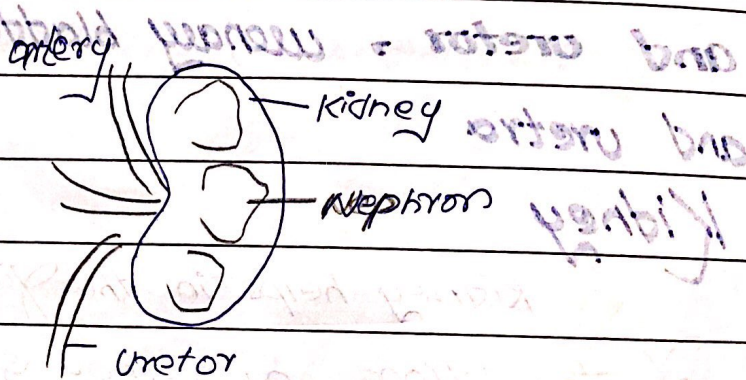
Kidney helps in the filtration of the blood by removing extra wastes. Kidney contains nephron that filter the blood and after removing wastes from blood, blood is sent back to the body and waste then sent to collecting ducts

Day: \_\_\_\_\_

Date: \_\_\_\_\_



From collecting ducts ~~blood~~ passes from ureter to the urinary bladder where it is stored and then pass to uretra, and from there outside the body.



## Nephron and how filtration takes place in nephron

Nephron is the structural and functional unit of

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• kidney • filtration • takes

place in nephron. the blood passes through network of capillaries called glomerulus from it it transfers into the bowman capsular then to proximal tubule which absorbs extra salt. NaCl

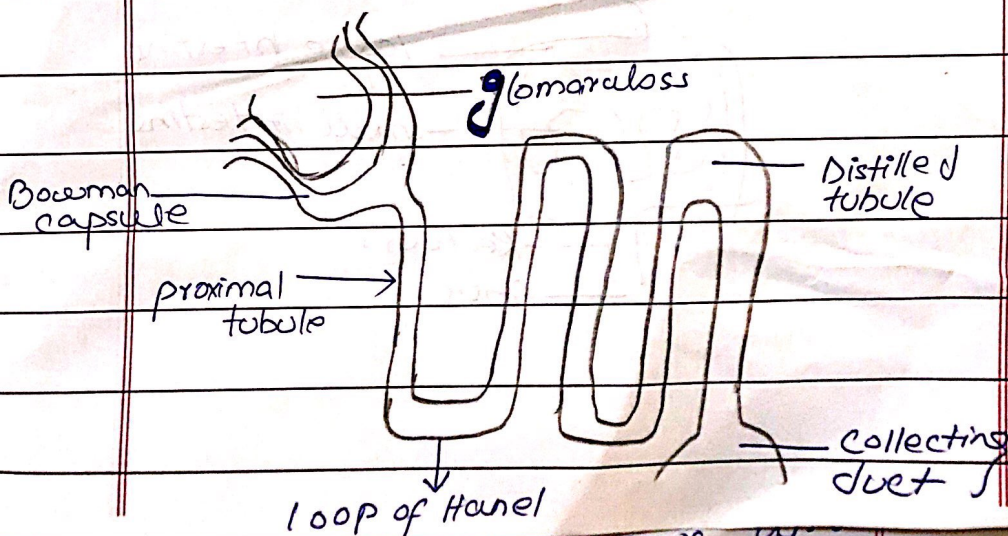
water. It regulates the PH. ~~of the~~ From it blood passes to loop of Henal which reabsorb

water and maintain the salt balance. then the blood is

transferred into distilled tubule where salts are removed and filtered

blood then passes to collecting duct from it blood passes from ureter

to bladder and from uretra outside the body



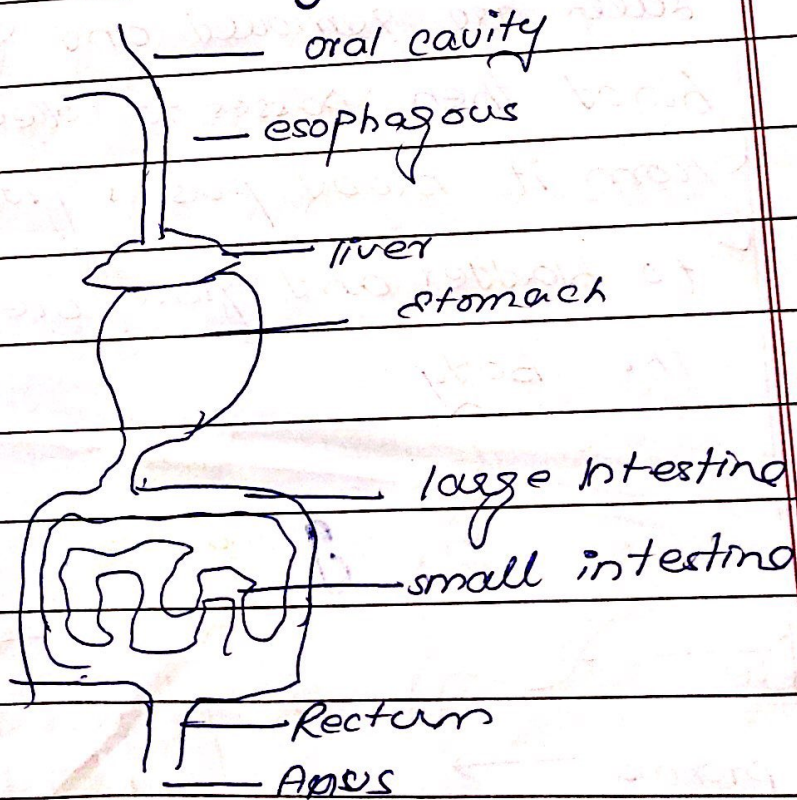
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# Write note on the Digestive System

Digestive system is a system where digestion of food occurs by breaking down food into the micro molecules and the waste then removed from the body.

Digestive System consist of the **Oral cavity**, **esophagus**, **Stomach**, **(Liver)**, **small intestine** and **large intestine**



Oral Cavity The oral cavity consists of teeth which are 32 in number helps in grinding of food. Salivary glands that helps in release of saliva which contains water and the sodium carbonate use as an antiseptic. It also release enzyme which converts starch into the maltose. The food mixing is done through the help of tongue and food become a ball like structure called bolus.

## Esophagus

Esophagus does not take part in digestion food passes from it to stomach

## Stomach

Stomach is a J shaped organ which helps into break down of food. Its lining are covered with mucus and it contains HCl for killing of microorganism and absorption of

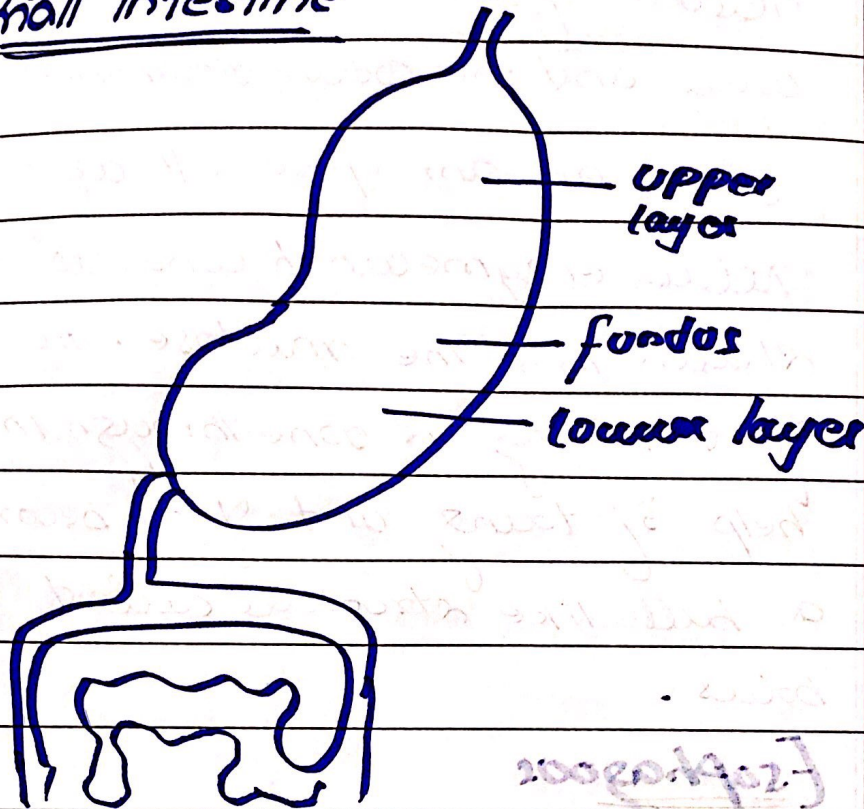
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protein takes place in stomach. Food  
in form of chyme then move  
towards small intestine. 10%.

90% absorption takes place in stomach.

### Small Intestine



90% of the absorption  
takes place in the  
small intestine. Pancreas  
secrete pancreatic juices  
through duct into small intestine  
to break down enzymes.

### Liver

Liver is the largest  
organ of the body. It releases

Day: \_\_\_\_\_

Date: \_\_\_\_\_

bile juices which converts  
galls into fatty acids into the  
small intestine.

### Other function of liver

- Detoxification of the harmful substance
- ~~Absorbs~~ extra sugar stored in it
- Converts galls into fatty acid

### Small intestine has three parts

#### Duodenum

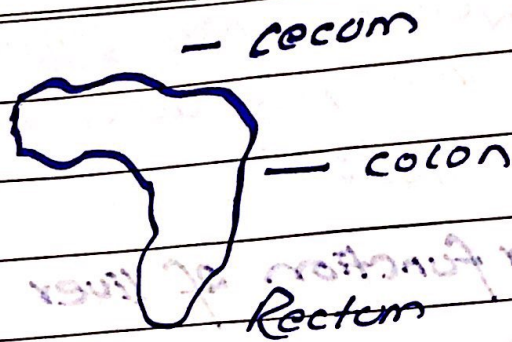
Absorption takes place  
in it

#### Jejunum and Ileum

Absorption of water and  
nutrients takes place in  
these. Ileum contains  
hair like structure which  
absorbs the extra nutrients.

### Large intestine

The food which is not  
absorbed in small then go to  
the large intestine.



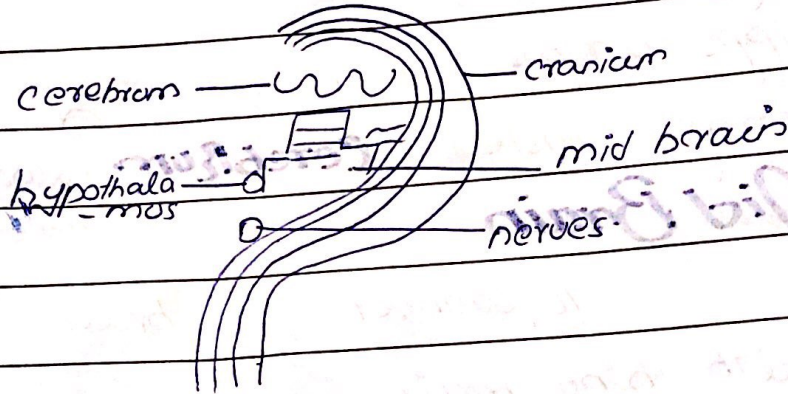
Cecum absorb the extra water then colon reabsorb the water and nutrients then the waste is stored in the rectum from it is excreted to the outside from the body.

## Central Nervous System

There are two nervous system in human being one is central nervous system and other is peripheral nervous system. Central nervous system consist of brain and spinal cord while other contain all the nerves in body out side of spinal cord and brain.



# Human Brain



Brain is the major part of the central nervous system. It is a supervisory body organ controls the function of the body. Human brain is divided into mid brain, hind brain and fore brain.

## Fore Brain

Fore brain consist of three part it is the outer part of brain.

- ① Thalamus: It carries sensory information towards the (hypothalamus) Lymbic system
- ② Hypothalamus consist of Amagdala: which is emotional

brain

Hypothalamus : It controls

hunger and thirst

Hippo campus : It is a memory

storage system **Cerebellum** : largest part  
control memory, reasoning

## Mid Brain

It connect fore brain

with hind brain

It controls the movement

of eye

## Hind Brain

Hind brain consist of the

① medulla oblongata : which

controls involuntary actions

like heart beat, blood pressure

and heart rate

## ② Pons

It controls the transition

between sleep and wakeful

ness

## ③ Cereblum

It store memory and

coordinate with the body.

# Spinal Cord

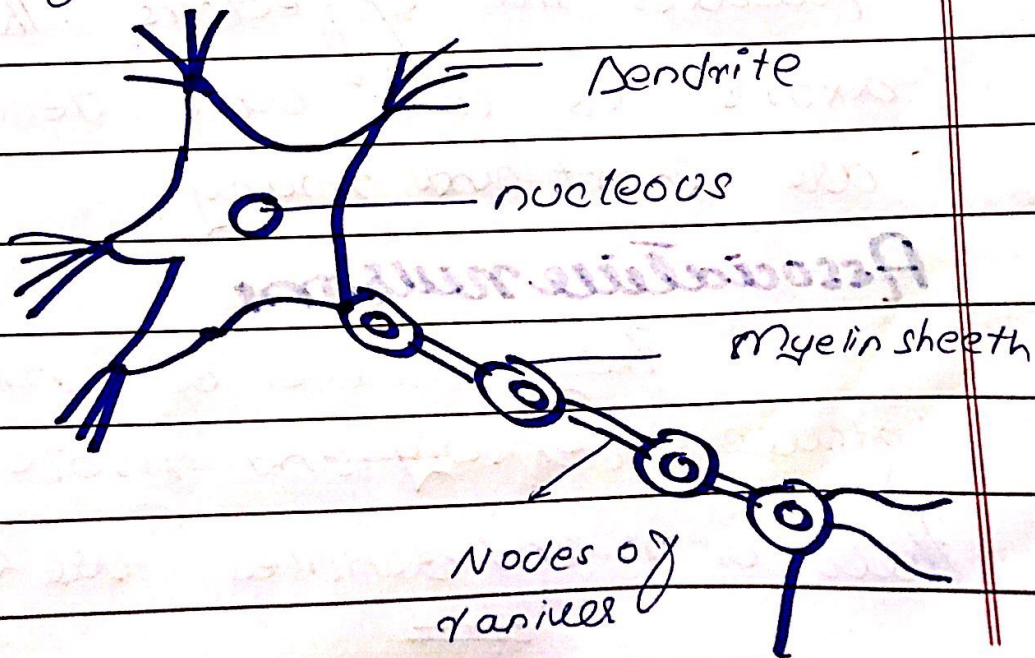
Spinal cord is the part of the central nervous system it transmits impulses from body to the brain and from brain to the body.

It is a coordinating center for simple responses.

It contains 31 pairs of spinal nerves.

# Neurons

Brain is made up of number of nerve cells called neurons they are the basic unit of the nerve cells. Specified to conduct message in form of the impulses.



It has a cell body which contains the nucleus. Dendrites bring impulses towards the cell body. Axons carry impulses away from the cell body.

**Neurons are classified into three sensory, (mixed and) motor and associative**

### **Sensory Neurons**

They carry messages from the ~~cell~~ sensory organs to central nervous system.

Axon are short and dendrite is single and long.

### **Motor neurons**

They carry messages from central nervous system towards the effectors. Their axons are long and dendrites are short and many.

### **Associative neurons**

They create a link between sensory and motor their axon and dendrites are short

# Peripheral Nervous System

Peripheral nervous system consist of the nerves out side the brain and spinal cord. It consist of 12 cranial nerves and 31 spinal nerves. The cranial and spinal nerves form two pathways

**Sensory pathway:** It carries messages from sensory organ to the central nervous system

## Motor pathway

It carries messages from central nervous system towards the effectors.

Motor pathway all further divided into two **Somatic and autonomic**

**Somatic:** It carries messages from the outer organ of the body (related to sensory organs).

# Autonomic

Autonomic are

Further divided into two  
Sympathetic and para-

sympathetic

**Sympathetic** controls the

body when there is

stress like increase pupil,

heart beat etc.

# Parasympathetic

It normalize the body

or work in the normal

conditions

# Conclusion

The human consist

of two nervous system

CNS and PNS and by their

coordination, they control

the whole body.