G-Science :- Ch No :- 1

"Human Organ System"

Write names of the main parts of following :-

Fore brain :-

Fore brain is the largest part of the brain. It consist of three main parts :-

(i) Cerebrum
(ii) Thalamus
(iii) Hypo Thalamus.

Hind brain :-

It consists of three parts :-

(i) Cerebellum
(ii) Pons
(iii) Medula oblongata.

Neuron :-

It consist of three parts :-

(i) Cell body
(ii) Dendrites
(iii) Axon.
(iv) Nucleus.

Nephron :-

Each nephron has parts :-

(i) Renal corpuscles
(ii) Renal Tubule

(i) Renal corpuscles:-

It consists of two structure glomerulus and Bowman's capsule.

(ii) Renal Tubule:-

It consists of Proximal tubule, Loope of Henle and distal tubule.

2:- Write the function of following:-

(i) Fore brain:-

It controls many functions like (i) Thinking (ii) feelings (iii) emotions (iv) seeing (v) hearing (vi) preceptions (vii) Memory (ix) Speech (x) sensory functions (xi) body temperature (xii) Decision making (xiii) Thirst and hunger.

(ii) Hind brain:-

1. It controls body balance and movements.
2. It controls many functions like sleep, swallowing, equilibrium and taste.
3. It also controls heart beat, breathing and digestion etc.

(iii) Nephron:-

1. Pressure filtration of blood.
2. Reabsorption of useful substances into blood.
3. Urine formation.

(iv) Neuron:- 1. Carry nerve impulses from sense organs to central nervous system.
2. It carry nerve impulses from central nervous systems to effectors.

2:- Give atleast three example of voluntary actions.

ns:- (i) Eating (ii) Reading
(iii) Walking

2:- Give atleast three examples of involuntary voluntary actions.

ns:- (i) Heart beat (ii) Breathing
(iii) Blinking of eyes.

2:- Define following:-

(i) Sensory neuron:- Neurons carry nerve impulses from sense organs do central nervous system.

(ii) Motor neuron:-
Neurons carry nerve impulses from central nervous system to effectors (muscles or glands)

(iii) Inter neuron:-
Those neurons that form a link between sensory and motor neurons.

2:- Skin is also considered as excretory organ why?

Ans:- Because some extra salts are also removed through skin during perspiration.

:- Differentiate between following:-

1.	Voluntary action The body actions which are performed under conscious control control are called voluntary actions. Example :- Speaking, eating, walking.	Involuntary action. The body actions which are performed without under conscious control are called involuntary action Example:- heart beat, Breathing, Blinking of eyes.
2.	Dialysis Cleaning of blood by artificial method is called dialysis It is done by a machine called dialyzer.	Lithotripsy. Bombardment of shockwaves on stones from outside the body. 2. Shockwaves break the stones into small pieces that are passed out through urine.
3.	Kidneys Two dark brown bean shaped kidneys are present in abdominal region. 2. They are involved	Lungs. Two sac like structures are present in chest region. 2. They help in breathing. 3. They help in Blood

in blood cleaning and urine formation.	oxygenation and removal of CO_2 from body.
3 Kidneys remove waste material from body.	

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* Differentiate between following :-

Neuron	Nerve
1. These are nerve cells which are basic structural and functional unit of nervous system.	1. Nerves carry messages towards CNS (central nervous system) and effectors in form of nerve impulses.

Receptors	Effectors.
1. The sites from where nerve impulses are carried.	1. The sites where nerve impulses are received.
2. For Example :- sensory organs like eyes, skin etc.	2. For Example :- muscles and gland

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"Human Organ System:"

Q: Explain the central nervous system (CNS)

Ans:- Central nervous system acts as control centre of whole nervous system. It consists of brain and spinal cord.

Brain:-

Human brain is enclosed in bony skull called cranium. It is divided into three parts.

1. **Fore brain:-**

It is the largest part of brain. It consist of three parts:

a. Cerebrum
b. Thalamus
c. Hypothalamus

Cerebrum:-

It is top most part of brain. It is divided into right and left cerebral Hemispheres. Cerebrum controls many functions like thinking, feelings, emotions, seeings, hearing, preceptions, memory, speech, decision making etc.

Thalamus:-

It controls many sensory functions

Hypothalamus:-

It lies at the base of thalamus.

It controls body temperature, hunger and thirst.

2. Mid brain:-

It is smallest part of brain and present below cerebrum. It receives information from sense organs and passes to different parts of forebrain.

3. Hind brain:-

It consists of three parts:-

(i) Cerebellum
(ii) Pons
(iii) Medula oblongata.

Cerebellum:-

It lies under back of cerebrum. It controls the body balance and makes accurate movements.

Pons:-

It is oval shaped structure present below mid brain. It controls many functions like sleep, swallowing, equilibrium and taste etc.

Medula oblongata:-

It forms posterior part of brain. It is connected with spinal cord. It controls heart beat, breathing and digestion etc.

Spinal cord:-

It runs backwards inside back bone. up to its lower ends. It creates a link between brain and other body parts. It also controls some reflex actions.

G-Science :- "Human Organ System"

Q:1 Describe peripheral nervous system.

Ans:- Peripheral nervous system:-

Peripheral nervous system(PNS) consist of a network of nerves which are spread in the body to connect all the body parts to the central nervous system(brain and spinal cord). The nerves which are arise from brain is called cranial nerves. The nerves which arise from spinal cord is called spinal nerves. There are 12 parts of cranial nerves and 31 part of spinal nerves in human body.

Q:2 Write notes on:-

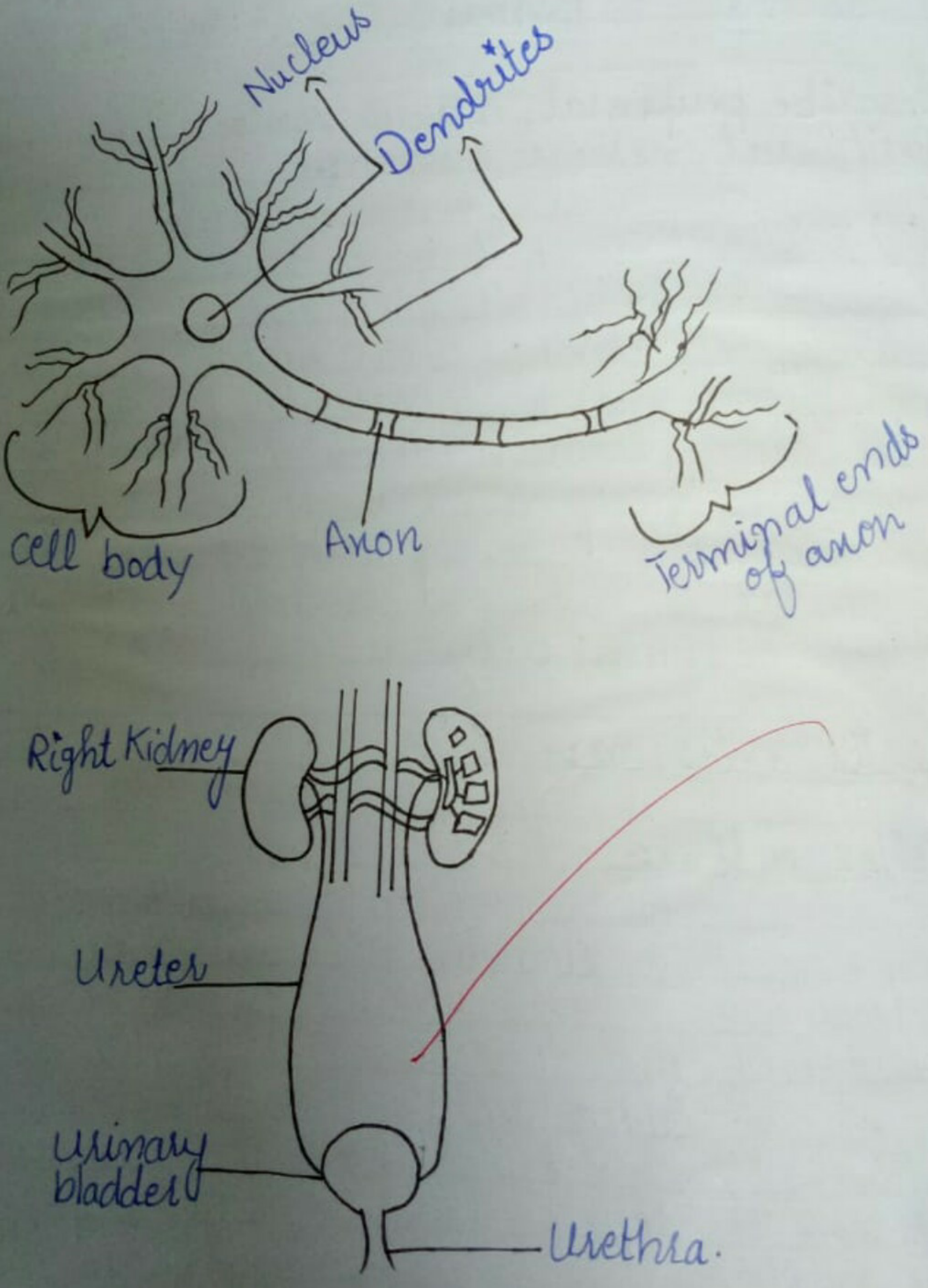
a) Reflex action:-

An immediate and involuntary response to a stimulus is called reflex action.

For Example:-

Quick pulling of a hand just after touching the hot objects is a common example of reflex action. The nerve impulses is carried by sensory neuron to spinal cord. The inter-neuron of spinal cord transmits the

Q:3 Label the diagram:-



impulse to motor neuron. The motor neuron carries the impulses to arm muscles (effector). The arm muscles contract and pull the hand back.

b) Renal failure:-

Renal failure is complete or partial failure of kidneys.

Causes:-

The main causes of Renal failure are long terms infections, diabetes mellitus and hypertension. Sudden blockage of blood supply to the kidneys may also result in Renal failure. Dialysis and kidneys trans plant are the treatments of Renal failure.

c) Dialyzer:-

Cleaning of blood by artifical methods is called dialysis. It is done by a machine is called Dialyzer. The blood of patient is passed through the dialyzer which contains dialysis fluid. Blood flows through the tubes of the dialyzer and dialysis fluid flows it around these tubes. The waste materials moves from blood to dialysis fluid. The cleansed blood is returned to the body.

bladder and a ure

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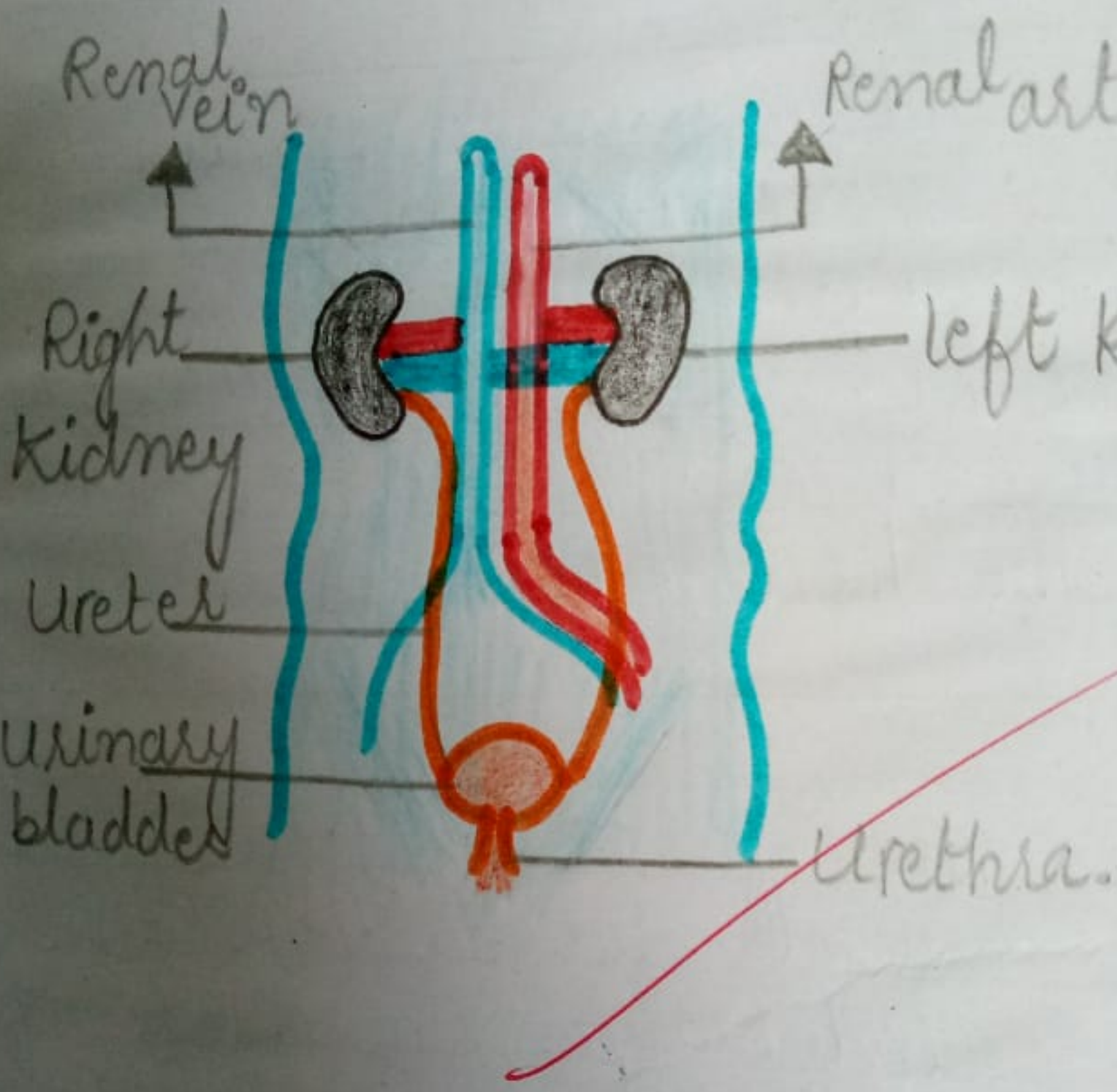
ram: Q:1



"HUMAN ORGANS SYSTEM":-

Q:1 Describe the main parts of excretory system in man.

Ans:- i) Kidneys :-

Human body has two dark brown bean shaped kidneys in the abdominal region. The outer surface of kidneys is convex while the inner surface is concave

ii) Ureter :-

A tube which arises from each kidneys and enters in urinary bladder is called ureter.

iii) Urinary bladder :-

Urinary bladder is a masular sac which collects urine from both ureters.

iv) Urethra :-

A fine tube through which urine is released from urinary bladder to the outside is called Urethra.

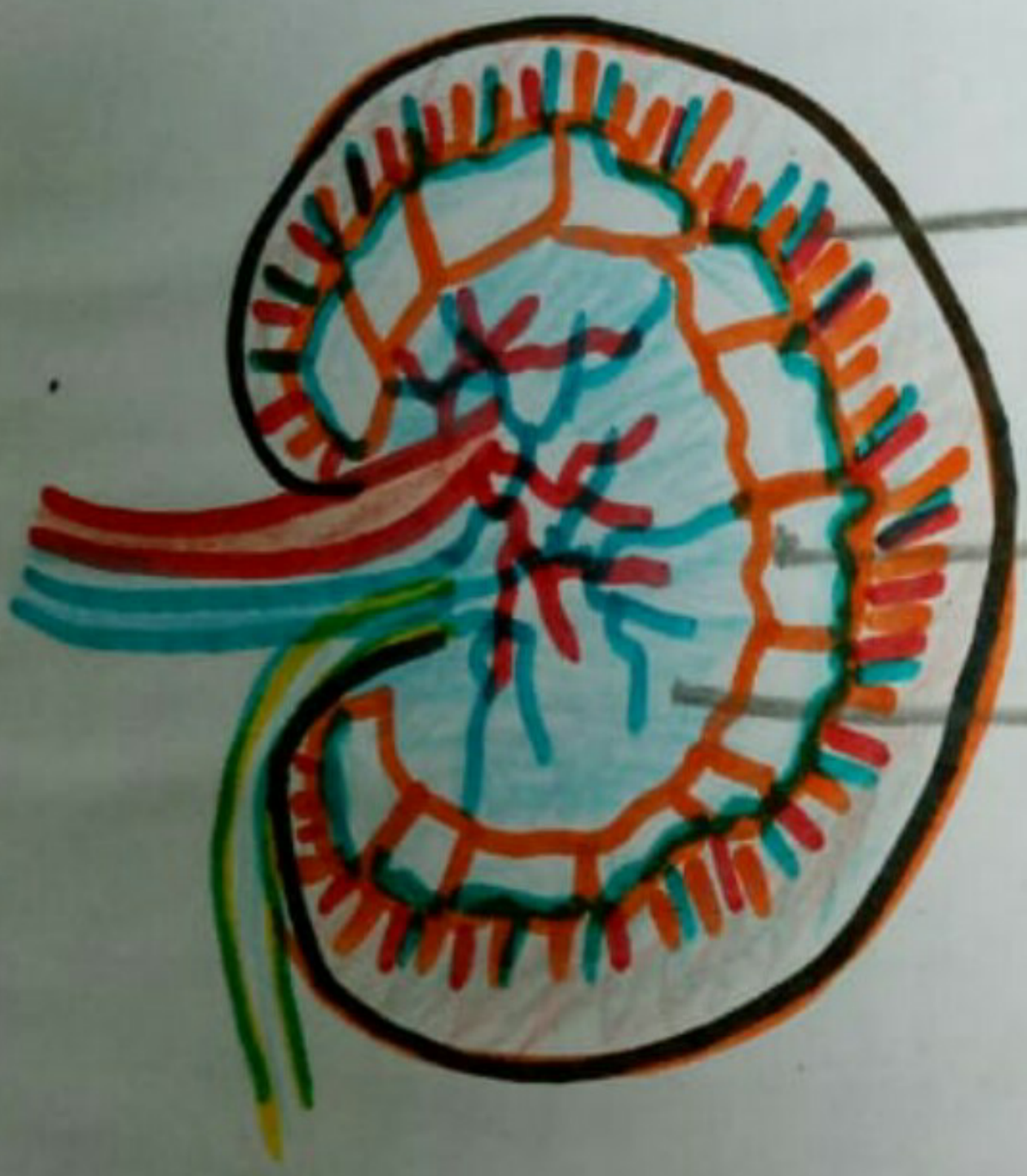
Q:2 Write a note on Internal structure of kidneys.

Ans:- Internal structure of kidneys :-

Internally, each kidneys is divided into three regions :-

(i) Renal Cortex

"Diagram: Q:2"



(ii) Renal medulla
(iii) Renal pelvis.

Renal Cortex :-

Renal cortex is the outermost region.

Renal Medulla :-

Renal medulla is the middle region which is divided into conical masses called Renal pyramids.

Renal Pelvis :-

Renal pelvis is the inner area where urine is drained. The urine from Renal pelvis moves into ureter.

Q:3 Describe structure of nephron.

Ans:- **Nephron :-**

Nephron are the functional and structural unit of kidneys. Each nephron ha two part :- renal corpuscles, renal tibule

Renal corpuscles :-

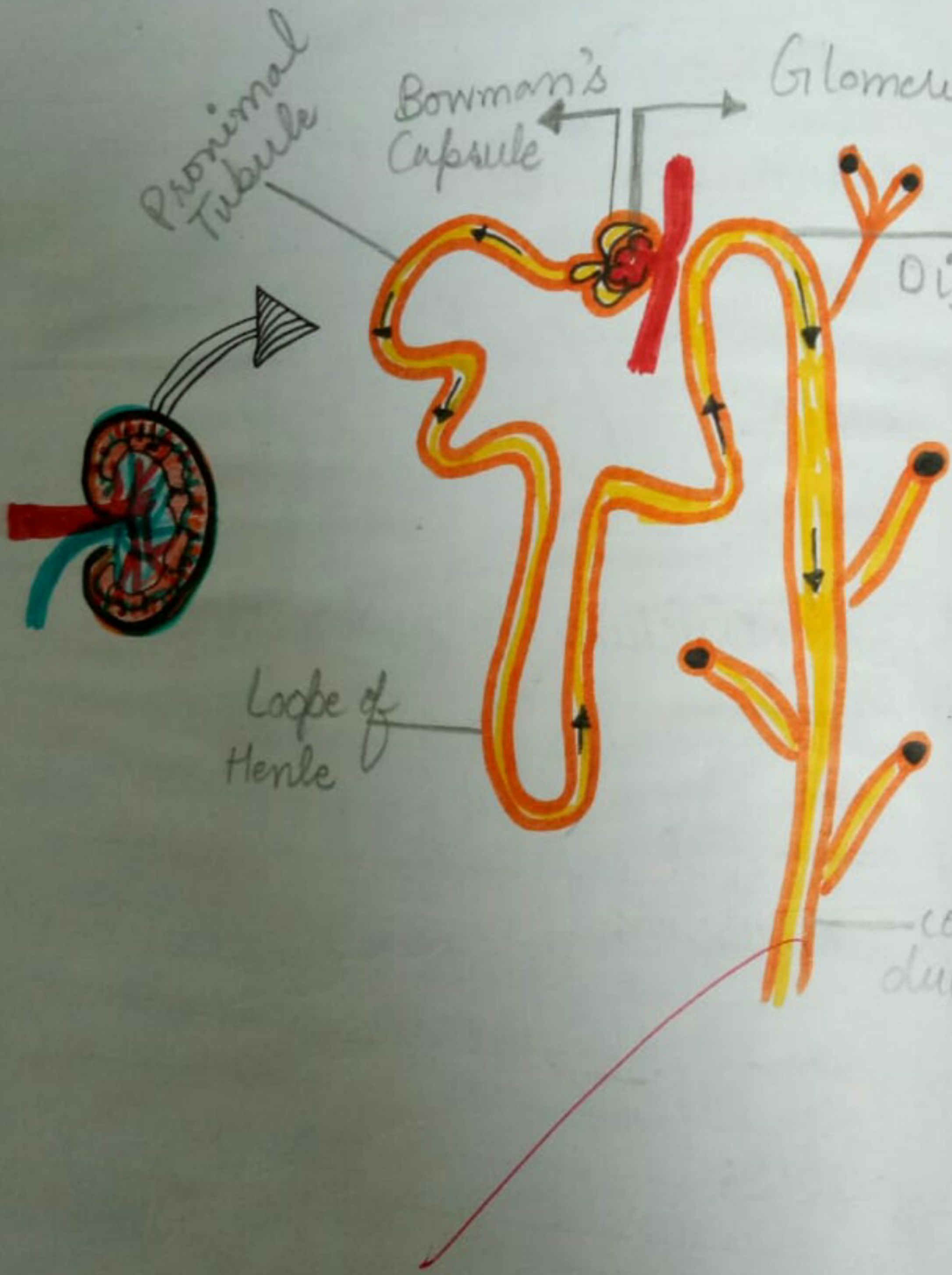
It is first part of nephron. It consists of two structures, ie. Glomerulus and Bowman's Capsule.

Glomerulus :-

Glomerulus is a tuft of blood capillaries formed by the division of small arteries.

Bowman's Capsule :-

Bowman's Capsule is a cup-shaped structure enclosing glomerulus.


Proximal Tubule
Bowman's Capsule
Glomerulus
Distal Tubule
Loope of Henle
collecting duct