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# Liver is the Chief Chemist organ of body. Elaborate.

Liver is classified as gland. It is four lobed organ. Its shape is triangular. Its weight is about 3 pounds. Liver performs more than 500 functions in a body so, that's why it is the Chief Chemist organ of body.

## Functions:-

→ Liver produces bile which temporarily stored in Gallbladder. Which helps small intestine breakdown and absorb fats, Cholesterol and some amount of vitamins.

→ Bile converts fats into fatty acids through gallbladder duct.

→ Vitamin k is necessary for creation of certain coagulants that clot blood. Bile is essential for vitamin k absorption and is created in the liver

→ Carbohydrates stored in liver as a glycogen and it releases when sudden amount of energy is needed.

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→ Liver performs **Synthesis of Urea Cycle** It converts $NH_3$ into Urea as ammonia is more toxic and is formed after metabolism of amino acids.

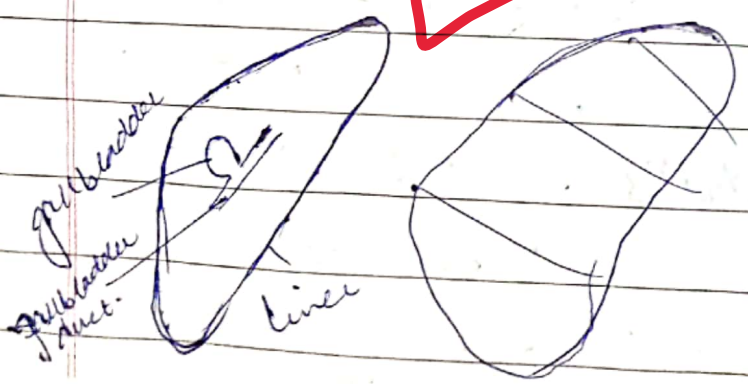
→ Liver **stores** vitamin A, D, K, E, $B_{12}$.

→ It Liver helps to **filter** and ~~improve~~ remove compounds from body e.g alcohol and drugs.

→ It helps in **prevention** of leaking of blood from blood vessels.

→ The bilisubin is formed by breakdown of haemoglobin. The iron is released from haemoglobin is stored in liver and used to make next generation blood.

Hence, liver is chief chemist as digestion, Prevention, Protein Synthesis, Production, detoxification, filtration, storage process done in it

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# Q no. 2

## What is circulatory system? Role of human heart in blood.

It is defined as

"The circulatory system is the system in which circulation of blood in body is done."

The circulation and transports of nutrients, gases i.e. $CO_2$, $O_2$, $N_2$.

It has three components.

i) Blood ii) Blood vessels iii) heart.

## Role of Heart

Heart is the pumping organ in circulation of blood.

It is fist sized organ in body and has four lobes upper two are Artria and lower two are Ventria.

### Lobes:—

The names of lobes are:—

Right Artrium : Left Artrium.

Right Ventricle : Left ventricle

### Process of Circulation:—

The deoxygnated blood came from

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body.

**Vena Cava:-**

The deoxygenated blood enters into largest vein Vena Cava.

**Right Artrium:-**

Then, blood enters from vena cava into right artrium. When blood enter this artrium contracts.

**Tricuspid Valve:-**

Tricuspid valve is present next to right artrium which prevents the back flow of blood.

leave spaces between arguments for neatness.

**Right Ventricle:-**

Blood enters into right ventricle and it also contracts and Lub dub sound produces.

**Pulmonary artery:-** Then, blood enters into pulmonary artery which contains deoxygenated blood.

**Lungs:-**

**pulmonary vein:-**

The deoxygenated blood enters into lungs. The oxygen is present in lungs. The oxygenation of blood occurs in it.

**Pulmonary vein:-** Blood enters into pulmonary vein which contains oxygenated blood.

**Left Artrium:-**

Now, the oxygenated blood enters from lungs into Left artrium. Left artrium contracts when blood passes.

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## Bicuspid valve :-

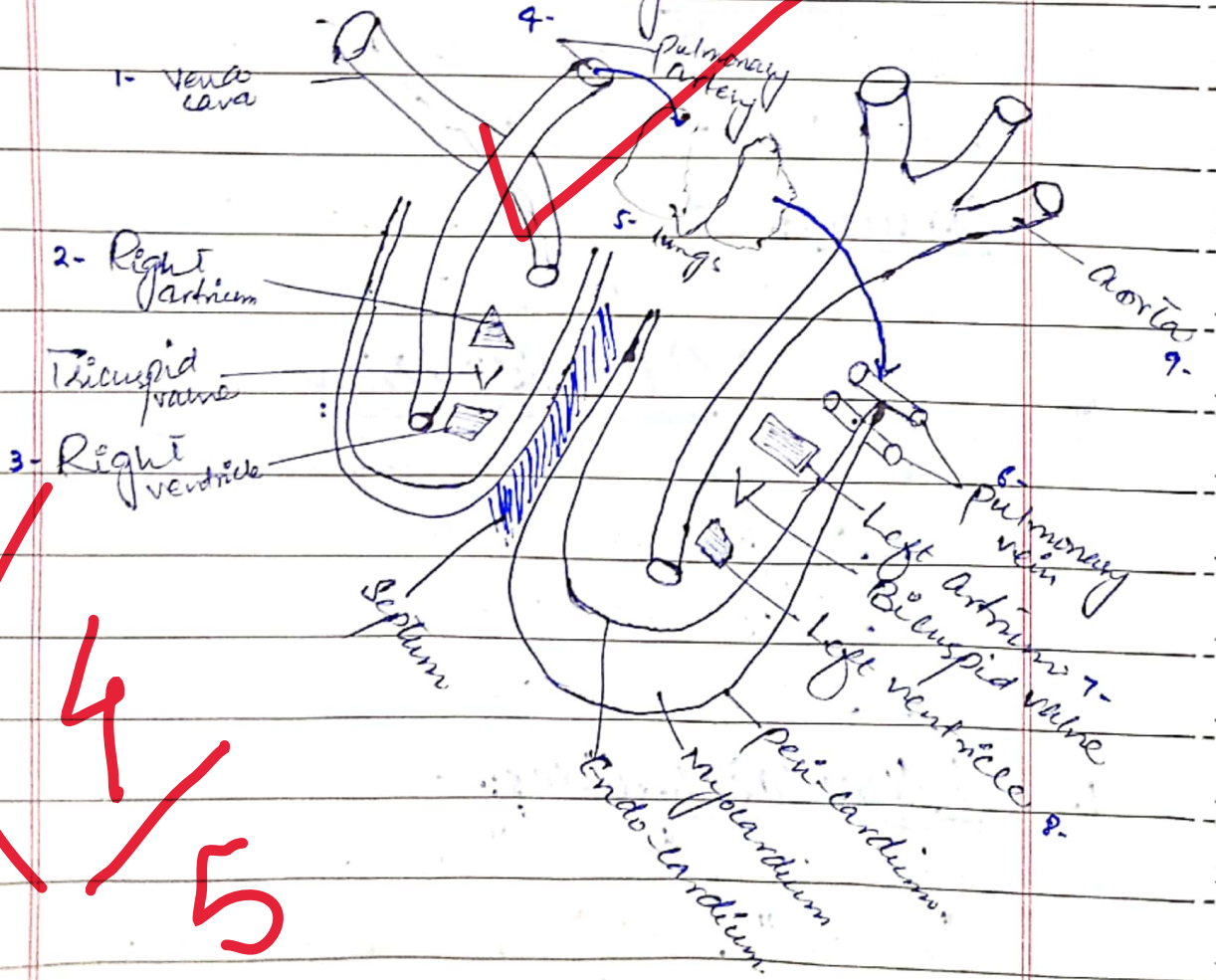
Bicuspid valve prevent the backflow of blood.

## Left ventricle :-

From Left artium, oxygenated blood enters into Left ventricle.

## Aorta :-

Aorta is the largest Artery and blood enters into aorta. Aorta has three lobes which supplies oxygenated blood towards body.

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work on the paper presentation and the neatness.

structure also needs a bit of improvement

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# What are Carbohydrates? Write its Classification.

## Carbohydrates :-

Carbohydrates are source of energy. They are essential for energy of mental, Lungs, kidney, heart etc.

### Sources :-

Sources of Carbohydrates are potatoes, milk, meat, Sweet fruits, eggs etc.

### Deficiency :-

Deficiency of Carbohydrates causes weakness in body.

**Overuse :-** Overuse of it causes Obesity, Diabetes.

### Classification

Carbohydrates are classified as

- Monosaccharides
- Oligosaccharides
- Polysaccharides

### 1- Monosaccharides :-

Mono means "Single" Sakson means "Sugar". They are also known as Simple Sugars.

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Common monosaccharides are glucose, fructose, galactose.

**Examples:-**

**Glucose :-** A source of energy for respiration and blood sugar.

**Fructose :-** also known as "fruit sugar". A sugar found in honey.

**Galactose :-** A sugar in milk and yogurt. known as "brain sugar".

**Formula:-** Its formula is $C_n(H_2O)_n$.

## 2- Oligosaccharides :-

"Oligo" means "few" and "sakkar" means "sugar". Oligosaccharides comprised of monosaccharides ~~unit~~ from three to ten units. Oligosaccharides yield two monosaccharides on hydrolysis is **Disaccharides** and three monosaccharides known as trisaccharides.

**Formula :-**

$C_n(H_2O)_{n-1}$ $C_n(H_2O)_{n-2}$

↓ ↓

Disaccharides Trisaccharides.

**Examples :—**

→ **Sucrose :-**

It is formed following photosynthesis

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in green plants. It consists of Glucose and fructose through $\alpha, \beta$ linkage.

→ **Lactose:-**

It consist of glucose and galactose through $\beta$-linkages.

→ **Maltose:-**

It consists of two molecules of glucose through $\alpha$-linkage.
It is a product of starch.

3- **Polysaccharides:-**

Poly means many and saccharides mean sugar. They are compound sugars. They yield more than 10 molecules of monosaccharides on hydrolysis.

**Types:-**

→ Homopolysaccharides

→ Heteropolysaccharides

i- **Homopolysaccharides:-**

They have monosaccharides of same types. **e.g:-** Starch, fats.

ii- **Hetero-polysaccharides:-**

They have monosaccharides of different types. Hyaluronic acid

Formula:- $(C_6H_{10}O_5)_n$.

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good answer!!