

Q1: CIRCULATORY SYSTEM :-

Those vessels and muscles which helps to control the flow of blood around the body is called Circulatory System

→ Father of Circulatory System

William Harvey was known as the father of circulatory system.

→ Main Components :-

The Main Parts of Circulatory system are

- a) Heart
- b) Blood vessels

HUMAN HEART

Heart is made of linear muscles called cardiac muscle

It weights around, 250 - 350g

It's a fist-sized, muscular organ and pumps about 2000 gallons of blood every day.

Q2:

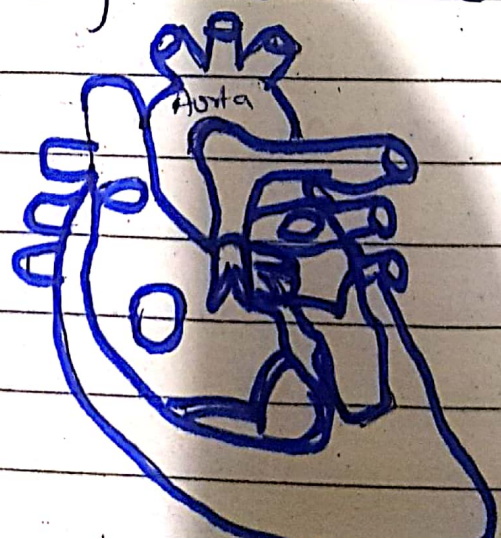
Heart has four chambers
Upper two Chambers (the right
and left atria receives
blood while the lower two
Chambers (the right and left
ventricles are pumping Chambers.
The Right side of the heart
pumps deoxygenated blood to
the lungs, while left side
of the heart pumps oxygenated
blood to the body.

- ①
- ②
- ③
- ④
- ⑤

The heart, blood and blood
vessels work together to service
the cells of the body. By
using arteries, veins, capillaries
the blood carries CO_2 to the
lungs and picks up O_2 and
provides cells with nutrients.

The main function of Circulatory
System is the transportation of
oxygen throughout the body.

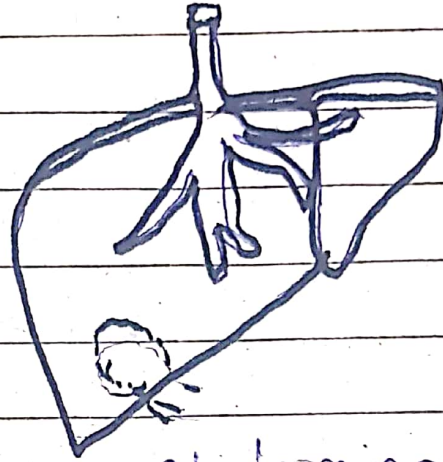
HEART



Q2: LIVER AS CHEIF CHEMIST :-

Human have 5 vital Organs that are essential for their survival. It includes :

- ① Brain
- ② heart
- ③ kidney
- ④ Lungs
- ⑤ Liver.



LIVER :-

Liver is an abdominal glandular organ in the digestive system. Liver support other organs too.

It is the second largest organ. It weighs around 3 pound. It has 4 lobes and also contain bile ducts.

FUNCTION:

Liver act as Chief Chemist because it has several functions in the human body.

- Detoxification
- Metabolism mechanism
- Hormone regulation
- Digestion

Decomposition of Red Blood cells.
It produces bile, a chemical substance which helps in breaking down of fat.
It removes toxic substances from blood such as alcohol and drugs. It keeps hormone level balance.

Liver plays central role in all metabolic processes in the body.



Carbohydrates :-

Carbohydrate are the chief source of energy.

It is mainly composed of atoms of Carbon, hydrogen and Oxygen.

It is the most abundant organic substances in nature.

The formula of Carbohydrates is $C_m(H_2O)_n$.

Classification

Carbohydrates are mainly divided into four major groups.

- M T W T F S
1. Monosaccharide
 2. Disaccharide
 3. Oligosaccharide
 4. Polysaccharide

Monosaccharides :-

They are also known as simple sugars because they can't be hydrolyzed. They are subdivided into triose, tetrose, pentose, hexose etc.

Examples of Monosaccharides are glucose, fructose etc.

Oligosaccharide :-

They are compound sugars. It yields 2 molecules of monosaccharide on hydrolysis. It is known as disaccharide.

General formula is $C_n(H_2O)_{n-1}$ for disaccharide. Two monosaccharides can be linked together to form double sugar or Disaccharide.

Polysaccharides are compound sugars and yield more than 10 molecules of monosaccharides.

Formula is $(C_6H_{10}O_5)_n$

Examples are starch, glycogen etc.

Poly saccharides are complex carbohydrates formed by the polymerization of large number of monomers



Water Pollution

Any change or modification in physical, chemical or biological properties of water is called water pollution.

The Contamination of water bodies were very often by human activities

Types :-

Ground Water pollution :-

The release of substance into subsurface ground water into lakes, streams, rivers etc.

Oil Spillage

Oil slicks generally move toward shores, harming aquatic life and damaging recreational areas.

Surface water :

water that is found naturally on earth's surface. It includes oceans, rivers, lakes etc. The release of substances such as chemicals or energy into surface water is hazardous to health.

→ Causes of Water Pollution

1. Industrial waste are the major contributor of water pollution.
2. Marine Dumping
3. Sewage and wastewater
4. Oil leaks and spills
5. Global warming
6. Agricultural (addition of pesticides in runoff water).