Heart: Structure and Function

Structure of the Heart:

i. Shape & Size

Triangular, muscular organ made of cardiac muscle.

About the size of a clenched fist.

ii. Location

Positioned between the lungs, above the diaphragm.

Tilted slightly to the left, making it feel as if the heart is on the left side.

Chambers of the Heart:

The heart has four chambers:

- Upper chambers (Atria or Auricles): Receive blood.
- Lower chambers (Ventricles): Pump blood out of the heart.

The septum separates the left and right sides of the heart.

Functioning of the Heart:

i. Oxygen-Poor Blood Flow (Blue)

Blood from the body (low in oxygen) enters the right atrium. The right ventricle pumps this blood to the lungs through the right pulmonary arteries.

ii. Oxygen-Rich Blood Flow (Red)

In the lungs, the blood absorbs oxygen. Oxygenated blood returns to the left atrium via the left pulmonary veins. The left ventricle pumps this oxygen-rich blood through the aorta to the entire body

Heart's Pumping Mechanism:

The heart pumps blood by:

- Contraction and relaxation of the auricles and ventricles.
- These actions alternate regularly.

Heartbeat:

- One complete contraction and relaxation cycle.
- The sound of a heartbeat is caused by the opening and closing of heart valves.

Pulse:

- The sensation of blood pumping through arteries.
- Can be felt at the wrist, neck, or temples.

Heart Rate:

- Normal range: 60-100 beats per minute.
- Increases during physical activity, exceeding 100 beats per minute.