***MUHAMMAD TAHIR ABUBAKAR***

***18/MHS07/034***

***PHARMACOLOGY***

***ANA 202***

The heart is a muscle about the size of a fist, it lies posterior and to the left side of the sternum. The purpose of the heart is to pump blood through vessels, arteries and veins to all parts of the body, the inside of the heart is divided into four chambers, the top two chambers are called the atria and are collection chambers for blood, the bottom two chambers are called the ventricles and receive the blood from the atria and pump it to the lungs and the body, the chambers are separated by valves which control the direction of blood flow. There are four valve, the tricuspid valve, the pulmonic valve, the mitral valve and the aortic valve. Circulation begins at the right side of the heart where blood from the body comes to the right atrium which then passes to the right ventricle where it is pumped to the lungs to receive oxygen, once it receives oxygen, it flows to the left atrium and then to the left ventricle where it is pumped to the aorta and the rest of the body, on the right side of the heart, the tricuspid valve separates the right atrium and the right ventricle allowing blood to enter the ventricle but not flow backwards to the atrium. Blood flows through the pulmonic valve to get to the lungs. On the left side of the heart, the mitral valve separates the left atrium and the left ventricle, blood flows from the from the left ventricle to the aorta through the aortic valve and to the rest of the body. Arteries carry blood with oxygen and other nutrients throughout the body. Veins take blood back to the heart which pumps it to the lungs to be oxygenated. The heart arteries (Coronary arteries) provide oxygen and nutrients to the heart muscle, the right coronary artery carries blood to the bottom and the back of the heart, the left coronary artery splits into two vessels, one branch supplies blood to the front of the heart, the other branch delivers blood to the left side of the heart. An electric system transmits signals through out the heart to control its pumping. The electrical signal starts in the sinal atrial (S.A node) which is located in the upper portion of the right atrium and is known as the natural pacemaker of the heart. The electricalvsignal passes down to the lower chambers of the heart via the atrial ventricular (A.V node) which controls the signal so the atria contract before the ventricles. In the ventricles, pathways carry the signal throughout the muscle so they can contract at the same time to pump blood to the lungs and throughout the body.