# 3.1.1 Applied anatomy and physiology

## 3.1.1.2 Cardiovascular system

**Cardiac Conduction System & Cardiac Cycle**

Sketch a diagram of the conducting system of the heart here

**Redistribution of Blood (vascular shunting, vasoconstriction & vasodilation)**

Research the terms above and how the vascular shunt mechanism is controlled before and during exercise.

**Vascular shunt Control**

1 Fill in the missing spaces.

The vascular shunt mechanism is controlled by:

the located in the medulla

oblongata which stimulates the nervous system to either vasodilate or

vasoconstrict the and that

control the supply of blood to muscles and organs.

**Vasomotor control**

VCC receives information from:

* in muscles, aorta and carotid arteries inform the VCC that lactic acid and CO2 levels have increased and O2 and pH levels have decreased.
* in aorta and carotid arteries inform the vasomotor centre that systolic blood pressure has increased/decreased.

**Sympathetic nervous system**

The VCC responds by sending messages via the sympathetic nervous system to:

**Organs**

* Increasing sympathetic stimulation which the arterioles and pre-capillary sphincters, decreasing Q and distributes blood flow away from the non-essential capillaries of the organs.

**Muscles**

* Decreasing sympathetic stimulation which the arterioles and precapillary sphincters, which increases the distribution of Q to the capillaries of the working muscles.

**Homework**

Research the following terms that have an impact on the transportation of oxygen in the body:

1. Haemoglobin
2. Myoglobin
3. Oxyhaemoglobin disassociation curve
4. Bohr shift