# 3.1.1 Applied anatomy and physiology

## 3.1.1.2 Cardiovascular system

**Linking the Conduction system to The Cardiac Cycle**

Task to tackle: Fill in the missing words from the paragraph below using the following list of words:-

bundle of His sino-atrial

myogenic right atrium

pacemaker atria

ventricles purkinji fibres

insulated cardiac impulse

The electrical impulse responsible for stimulating the heart to contract is called the

\_\_\_\_\_\_\_\_\_\_\_\_\_. The heart is said to be \_\_\_\_\_\_\_\_\_\_\_\_ - it generates its own electrical impulse.

The cardiac impulse is initiated from the \_\_\_\_\_\_\_\_\_\_\_\_ (SA) node located in the

posterior wall of the \_\_\_\_\_\_\_\_\_\_\_\_\_\_ and is often termed the \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_.

The impulse travels through atria walls causing both atria to contract. The ventricles

are \_\_\_\_\_\_\_\_\_\_\_\_\_\_ from the atria and cannot be stimulated at this point.

The cardiac impulse reaches and activates the AV node in the right atrium which

passes the impulse down into the \_\_\_\_\_\_\_\_\_\_\_\_\_\_ located within the septum

of the heart.

The AV node helps delay the impulse allowing the contraction of the \_\_\_\_\_\_\_\_\_\_\_

to finish before the \_\_\_\_\_\_\_\_\_\_\_\_ begin to contract.

The bundle of His splits into left and right branches and spreads the impulse down to the bottom of the heart and then up and around the walls via a network of

\_\_\_\_\_\_\_\_\_\_\_\_\_\_, causing both ventricles to contract.

The ventricles relax and the cycle is repeated.

Explain how the heart controls the rate at which it beats [4]

**What four conditions allow extra oxygen to disassociate from Haemoglobin during exercise?**

