

# Excitation of the Heart (text pg 111 – 116)

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## **Excitation of the heart: (Pg 111 – 112)**

1. What electrical properties make cardiac muscle unique?
2. Define syncytium and excitability.
3. In which direction do the atria contract?
4. Create a flow chart illustrating how the electrical signal flows from structure to structure across the heart (start to finish).
5. What is the typical heart rate set by the SA node? Explain the autonomic control over the SA node.
6. What happens if the SA node is damaged?

## **Coronary Circulation: (Pg 113)**

1. What is a myocardial infarction (MI) and what causes it?
2. Trace out the structures that a single red blood cell would encounter as it leaves the heart on route to the myocardium and back to the heart.
3. What happens to the dissolved gases once the blood reaches the capillaries?
4. What are the two phases of the cardiac cycle?

## **Vascular System: (Pg 114 - 116)**

1. What are the three secondary systems which allow for blood to be returned back to the heart? How do each of them work?
2. What are the main functions of blood?
3. What makes up our blood - Copy out figure 7.7 on pg 116, and label it according to the contents of blood.
4. What are erythrocytes and their function? What is the specialized protein found in erythrocytes?
5. What are leukocytes? What is their function?
6. What are platelets? What is their function?