Directions: In the space provided use Standard English and grammatically correct sentences and paragraphs (unless otherwise noted) to respond to the statement or question. Note point values.

1. Identify and label the two action potentials. What ions move when and which way? (10pts)

2. Draw and label a normal electrocardiogram noting the cardiac events during each waveform. (5)

3. Use a flow chart to depict the common pathway for blood clotting. Use a labeled arrow to indicate where the drug Lovenox affects the common pathway. Briefly describe the extrinsic and intrinsic pathways that “feed into” the common pathway. Briefly note how the clotting cascade is really immersed in a negative feedback cycle. (8, 2, 5, 2 pts = 15)
4. List the three histological layers of arteries and veins noting key differences between the tunics. (5)
   a) 
   b) 
   c) 

What tunic plays a key role in vasomotion—why and how? (5)

Explain the results shown in the graph. (5)

5. Explain the carotid portion of the baroreceptor reflex using the graphs as a guide. (15)
6. Use the Poiseuille's equation to explain the various factors affecting blood flow. In your answer, include histological or anatomical features from our discussions that illustrate how flow is positively or negatively affected. (15)

7. The heart histologically is a muscle with some special characteristics. Inter-relate the heart as a muscle with the concepts of "pre-load" and "afterload". (10)
8. Describe the anatomical and physiological reasons for Claire's comments that capillaries are the places "where it all happens", the "place of business". Think about histology, physics, transport, metabolism, etc... you can think beyond this single unit of study if you choose. (15)