CIRCULATORY SYSTEM LAB DATA

A. Heart Sounds

     1.

     2.

         Rhythm –

         Strength –

         Regularity -

     3.

     4.

B. Pulse

     1. Resting Pulse Rate = _____

     2.

     3.

     4.

C. Blood Pressure

     1. Resting BP = _____

     2. Exercise BP

         a. 10 seconds post-exercise BP = _____

         b. 2 minutes post-exercise BP = _____

     3.

     4.

4. Comparison

      Resting –

      10 Second post –

      2 Minute post –

5.

6.

D. CARDIAC FITNESS TEST DATA

Table 6		
Condition	Rate or time	Points
Standing heart rate	beats/min	
Reclining heart rate	beats/min	
Reclining to standing	beats/min	
Before step test	beats/min	N/A
After 5 steps	beats/min	N/A
Recovery rate	seconds	
Endurance (after 5 – before 5)	beats/min	
		Total points:

QUESTIONS

1. How did your heart rate change after moving from a standing position to a reclining position? Is this what you expected? How do you account for this?

2. How did your heart rate change after moving from a reclining position back to a standing position? Is this what you expected? How do you account for this?

3. Predict what your heart rate might be if you had exercised for twice the length of time that you actually did. Explain.

4. How does your maximum heart rate compare to other students in your group. Is this what you expected? How do you account for this?

5. Why would athletes need to work longer and harder before their heart rates were at the maximum value?

6. How do you evaluate your physical fitness? Do you agree with the rating obtained from this experiment? Explain.

7. Current research indicates that most heart attacks occur as people get out of bed after sleep. Account for this observation.

E. EKG DATA

Table 1	
Interval	Time (s)
P - R	
QRS	
Q - T	
Full Heart Cycle	

Heart Rate	_____ beats/min

Table 2	
Standard Resting Electrocardiogram Interval Times	
P - R interval	0.12 to 0.20 s
QRS interval	less than 0.10 s
Q - T interval	0.30 to 0.40 s

QUESTIONS

1. The electrocardiogram is a powerful tool used to diagnose certain types of heart disease. Why is it important to look at time intervals of the different waveforms?

2. What property of heart muscle must be altered in order for an EKG to detect a problem? Explain.

3. Why can't an EKG be used to diagnose all diseases or defects of the heart?

4. Name and describe a cardiovascular problem that could be diagnosed by a cardiologist using a electrocardiogram recording.