# **LAB 8: Blood Pressure and Blood Characteristics**

## **POST-LAB REPORT (15PTS)**

Name(s) \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

**ACTIVITY 1.** **Effect of Body Posture on Heart Function**

1. (1 point) Compare the pulse taken manually and with the pulse oximeter in the supine position. Did they vary? What could be the cause of this variation?
2. (1 point) Why is the blood pressure less immediately upon standing than in the reclining position?
3. (1 point) Compare the blood pressure immediately on standing and the blood pressure standing after 5 minutes. What difference did you see?

**ACTIVITY 2. Effect of Exercise on Heart Function (done as a group)**

6. (1 point) Why did the heart rate (pulse) and BP increase with exercise? What is the effect on CO with the increase in HR and BP (MAP)?

7. (1 point) How long did it take for the pulse and BP to return to the resting values? Do you think the time it takes to return to normal would be the same if measured on an athlete versus a person who does not exercise?

**ACTIVITY 3. Active Hyperemia and Reactive Hyperemia**

**A. Active Hyperemia**

8. (1point) Explain the stimulus and physiological control center for blushing.

9. (1 point) Why does one see active hyperemia to the skeletal and cardiac muscles during exercise? Describe the physiological mechanisms.

10. (1 point) Why does one see active hyperemia to the skin during exercise? Describe the physiological mechanisms.

**B. Reactive Hyperemia**

11. (1 point) What stimulus causes reactive hyperemia?

12. (1 point) What is the physiological significance of reactive hyperemia?

**ACTIVITY 4. The Buffering Capacity of Blood**

13. (1 point) Which solution has the greatest buffering capacity? Why?

14. (1 point) Which solution has the least buffering capacity? Why?

**ACTIVITY 5. Determination of Blood Hematocrit and RBC Count**

15. (1.5 point) Show your work on how you calculated the hematocrit for your sample.

16. (1.5 point) Show your work on how you calculated the RBC count for your sample.