**Exam 3 Part B. Your Name:**

**Please TYPE your answers in an MS Word Document and when complete Email Dr. Kravitz your Exam 3 part B. For the Diagrams, please draw them out and either TAKE A PICTURE or SCAN your work and include in your MS Word Document or attach as SEPARATE files when you email Dr. Kravitz your completed exam. Exam 3 Part B is due by Midnight April 2. No late papers accepted. Also, academic honesty is totally active here. Please do your OWN work!**

This EXAM is open note. Please use the YOUTUBE Video & WEB LINK to guide your answers.

**Blood Flow Questions:**

**I have started the sequence of blood flow (below) using the graphic on our link. Please fill in the missing steps for 2, 4, 6, 8, 10, 12, 14, 16, and 18. (2 pts each)**

1. Venules

2.

3. Inferior & Superior vena cava

4.

5. Tricuspid valve

6.

7. Pulmonary semilunar valve

8.

9. Lungs

10.

11. Left atrium

12.

13. Left ventricle

14.

15. Aorta

16.

17. Arterioles

18.

**Cardiac Cycle Questions:**

1. What is the cardiac cycle? (2 pts)

2. What does diastole mean? (2 pts)

3. What does systole mean? (2 pts)

4. What AV valve is on the right side of the heart? (2 pts)

5. What AV valve is on the left side of the heart? (2 pts)

6. Type out in detail the 3 Phases of the Cardiac Cycle: (14 pts)

7. Which side of the heart pumps to the entire body? (3 pts)

8. Which side of the heart pumps to the lungs? (3 pts)

**Cardiac Conduction System Questions:**

1. Please draw and label the cardiac conduction system and either take a PICTURE of your drawing or SCAN your drawing and include within this document or as a separate attachment when you email Dr. Kravitz your completed exam. Make sure you label the right atrium, left atrium, right ventricle, left ventricle, SA Node, AV Node, Bundle of His, Right Bundle Branch, Left Bundle Branch, Purkinje fibers and Bachmann’s Bundle. (11 pts)

2. Which happens first: The electrical event or the mechanical event of the heart? (3 pts)

**EKG**

1. Define the EKG? (3 pts)

2. A line with no activity on an EKG is called WHAT? (3 pts)

3. Draw and Label an EKG and either take a PICTURE of your drawing or SCAN your drawing and include within this document or as a separate attachment when you email Dr. Kravitz your completed exam. Make sure you label the P wave, Q, R, S, and T wave. (10 pts)

4. What is happening during the P wave? (3 pts)

5. What Two events are happening during the QRS Complex? (6 pts)

6. What is happening during the T wave? (3 pts)

**Cardiac Function Terms and Cardiac Calculation Questions?**

1. What does sinus mean? (3 pts)

2. What does RHR mean? (3 pts)

3. What are the beats/min of a normal sinus rhythm? (3 pts)

4. What are the beats/min of sinus bradycardia? (3 pts)

5. What are the beats/min of sinus tachycardia? (3 pts)

6. Please define stroke volume? (3 pts)

7. Please define EDV? (3 pts)

8. At EDV are the ventricles filled or near empty? (3 pts)

9. Please define ESV? (3 pts)

10. At ESV are the ventricles filled or near empty? (3pts)

11. Which ventricular volume will always be the GREATEST volume (EDV, ESV or SV)? (3 pts)

12. A person is exercising very hard and has a heart rate of 190 beats/min and a stroke volume of 105 ml/ beat. What is the Cardiac Output in ml/min? (4 pts)

13. For the person exercising hard in question 12 (above) what is the Cardiac Output in L/min? (4pts)

14. A person at rest has a heart rate of 80 beats/min and a stroke volume of 65 ml/beat. What is the Cardiac Output in ml/min? (4 pts)

15. For the person at rest in question 14 (above) what is the Cardiac Output in L/min? (4 pts)

16. What is the physiological explanation of Exercise Hyperemia? (4 pts)

**Cardiovascular Response to Exercise Questions:**

1. Before you even start exercise, what happens to heart rate? (3 pts)

2. During exercise, heart rate and VO2 are very similar. Which is more associated to the actual exercise intensity, heart rate or VO2? (3 pts)

3. During incremental exercise, which blood pressure increases with intensity (systolic or diastolic)? (3 pts)

4. During incremental exercise, in HEALTHY persons, which blood pressure will stay the same or even lower (systolic or diastolic)? (3 pts)

5. During maximal exercise, how much blood flow (in percent) will go to muscle? (3 pts)

6. With exercise there is an increase in a-vO2 difference. What does this mean? (3 pts)

7. Please EXPLAIN thoroughly the 4 factors that increase Stroke Volume during exercise? (12 pts)

**End of Exam. Make sure you include your Diagrams with your Exam when you email to Dr. Kravitz**