Class/Lab Activity #3 Physiology

Questions to Consider from the Plasma Membrane Lecture:

1. List and briefly Describe the **4** roles of the **Plasma Membrane** (with specific examples if possible):

1)

2)

3)

4)

2. With regard to **Protein Channels** and **Protein Carriers**:

a) What are the 3 **gated Protein Channels** described in lecture? Give examples of their 'triggers'.

1) 2) 3)

b) What are three characteristics of **Protein Carriers** listed and described in lecture?

1) 2) 3)

3. With regard to **Surface Area** and **Rate of Diffusion**:

What two regions of the body were given as examples of having an enormous surface area?

The _____ and the _____.

4. *Philosophical Question*: With regard to the Na^+/K^+ pumps, what is the **purpose** of the Na^+/K^+ pump?

5. What the hormone (and gland) that has an effect on the number of Na^+/K^+ pumps? Describe the effect this hormone has on the pumps and then on the body as a consequence?

6. On the topic of **Water**: About how many liters of water are there in a typical 150 lbs person? _____.

7. In terms of the 3 Tissue Compartments, where is most of the water in the body located? _____.

8. What are the **3 Tissue Compartments** and state *briefly* how they **differ**?

1)

2)

3)

9. Name the examples of vesicular transportation given in lecture.

10. What's with **Transcapillary Fluid Dynamics**? How/why are HP and COP balanced in the capillary?

From Neurophysiology Lecture, answer as much as you can.

11. Name the 2 "long distance" control systems in the body: _____ and _____.

12. Briefly describes how these tow control systems in the body differ?

13. *Semi-Philosophical Question*: How is the Neuron the **microcosm** of the Nervous System reflex loop?

14. What is the point of talking about **Equilibrium Potentials** for Na^+ and K^+?

15. Draw an **Action Potential** for a **Neuron** on axis's below. Include all labels and values and phases, etc.

16. List 6 ways that **Graded Potentials** are different from **Action Potentials**.

1)
2)
3)
4)
5)
6)

17. *Philosophical Question*: What are the purposes of Graded Potentials and Action Potentials?

18. What is summation? Compare **Temporal** to **Spatial** Summation.

19. List an area or concept that you feel very confident about in physiology from material we are covering.

20. What is an example of an area or current concept in class you'd like to become more clear?