Pulse-Oximetry, Pre–Quiz Name:\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

These questions are intended to understand what previous exposure you’ve had to material we are going to be covering in class. You aren’t graded for right or wrong answers, so please just answer honestly. If you don’t know an answer, feel free to write, “I don’t know”.

1. What are the primary medical uses of the pulse-oximeter (sometimes referred to as a pulse ox)? If you can, explain how it does those primary functions.

Confident neutral not confident

I am confident in my answer. 5 4 3 2 1

2. Why does a pulse oximeter give wrong readings for the oxygen levels in the blood for anemic patients?

Confident neutral not confident

I am confident in my answer. 5 4 3 2 1

3. What makes the pulse-oximeter an inexpensive and convenient instrument? Identify the specific details from physics that make this possible.

Confident neutral not confident

I am confident in my answer. 5 4 3 2 1

4. If the pH level of Bromothymol blue is going to be a good analog for the oxygenation of blood, then what can you infer about the difference between Bromothymol blue in a neutral solution versus an acidic solution? Why does this help?

Confident neutral not confident

I am confident in my answer. 5 4 3 2 1

Pulse-Oximetry, Post Quiz Name:\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

You aren’t graded for right or wrong answers, so please just answer to the best of your ability.

1. What are the primary medical uses of the pulse-oximeter (sometimes referred to as a pulse ox)? If you can, explain how it does those primary functions.

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4. If the pH level of Bromothymol blue is going to be a good analog for the oxygenation of blood, then what can you infer about the difference between Bromothymol blue in a neutral solution versus an acidic solution? Why does this help?

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I am confident in my answer. 5 4 3 2 1

Feedback

1. After completing this activity do you feel that you better understand how the pulse-oximeter works?

(5- Much better understanding to 1- No additional understanding)

 5

 4

 3

 2

 1

1. How would you rate this lab activity with other physics, chemistry, or biology you have taken?

(5- Very interesting to 1- Not at all interesting)

 5

 4

 3

 2

 1

1. Do you have any additional comments or suggestions about this activity?