**Week 3 Questions**

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| **Water Testing and Measurement**  |
| 1. How many parameters will our water test strips test? \_\_\_\_\_\_\_\_\_\_\_\_2. Name three of the parameters that we will test for.a. \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_b. \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_c. \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_3. A result that is underlined in red indicates that the sample is \_\_\_\_\_\_\_\_\_\_\_\_\_ the \_\_\_\_\_\_ \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_.4. The Red Sea Algae Control Test Kit tests for \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ and \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_.5. For the first test of the Red Sea test kit (PO4), do the following:a. Begin with \_\_\_\_\_\_\_\_\_\_\_ mL of sample water.b. Add \_\_\_\_\_\_\_\_\_\_\_ drops of reagent A.c. Swirl \_\_\_\_\_\_\_\_\_\_ seconds.d. Add \_\_\_\_\_\_\_\_\_\_\_ drops of reagent B.e. Swirl \_\_\_\_\_\_\_\_\_\_ seconds.f. Wait \_\_\_\_\_\_\_\_\_\_ minutes.For the second test of the Red Sea test kit (NO3), do the following:A. Begin with \_\_\_\_\_\_\_\_\_\_\_ mL of sample water.B. Add \_\_\_\_\_\_\_\_\_\_\_ drops of reagent A.C. Swirl \_\_\_\_\_\_\_\_\_\_ seconds.D. Add \_\_\_\_\_\_\_\_\_\_\_ level scoop of reagent B.E. Swirl \_\_\_\_\_\_\_\_\_\_ seconds with the lid on.F. Add \_\_\_\_\_\_\_\_\_\_\_ level scoop of reagent C (with a different spoon).G. Swirl \_\_\_\_\_\_\_\_\_\_ seconds with the lid on.H. Wait \_\_\_\_\_\_\_\_\_\_ minutes.6. High-range test ... only if necessary.Begin with \_\_\_\_\_\_\_\_\_\_\_ mL of sample water with \_\_\_\_\_\_\_\_\_\_\_\_ mL of RO water. Thenfollow Steps B through H from #5 above.7. Spectroscopy: The study of \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ radiation emitted orabsorbed by a \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ species.8. Spectrophotometry is a type of spectroscopy that measures how much \_\_\_\_\_\_\_\_\_\_\_\_\_ is \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ by a chemical substance by measuring the \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ of the light beam that is not absorbed.9. What we see from color is \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ light, the difference between incident light and absorbed light.10. Parts of a spectrophotometer:a. Light sourceb. Collimator (\_\_\_\_\_\_\_\_\_\_\_)c. Monochromator (\_\_\_\_\_\_\_\_\_\_\_\_ or grating)d. \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ selector (slit)e. Sample solution (in cuvette)f. Detector (\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_)g. Digital display or meterThe relationship between absorbance and transmittance is logarithmic. |