Name:_______________________  Section:___________________

Homework Assignment #1 (Due in Sections Week of Jan. 17)

1) We generally consider the Challenger expedition to be the first truly oceanographic expedition. The HMS Beagle (with Charles Darwin) sailed a few years before the Challenger…why isn’t that considered the beginning of modern oceanography?

2) Explain why it might be more likely that life began in cold, mineral-rich regions of the ocean rather than in a hot primordial soup near the surface.

3) While on a vacation cruise, your boat sinks and you and your fellow passengers are stranded on a deserted island. You have a 2-way radio, but your rescuers need to know where you are. Fortunately, at night you can see that the North Star is exactly 1/3 of the way from the horizon to directly overhead (so it’s fairly low in the sky), and during the day, when the sun is directly overhead, the ship’s clock (which is set to Greenwich Mean Time) says it is 2 PM. Where are you? HINT: Look at Appendix III in the text.

4) Based on your understanding of how earth evolved geologically and biologically, explain how you would search for life on the planet Mars using equipment such as might be found on the recent Mars explorer vehicles (gas chromatograph, drill, high-resolution cameras, etc.)

5) How many atmospheres have existed on the planet Earth? What was the same or different about them?

6) What, if anything, does global plate tectonics have to do with the origins of life on this planet?

7) As a first step towards completing your term paper, look through the class syllabus, textbook, website, and any other sources of information you think appropriate. Choose two potential topics that might interest you for a term paper, and describe them. The goal of this exercise is to get you thinking about what interests you in the field of oceanography, and to help you find an oceanographic topic that is not too general, but also not so specific that you won’t find enough material. As you complete this exercise, remember that your paper can be on any subject in oceanography, so you don’t need to restrict your choices to things we have, or will, cover in class. This is also just a starting point, so you will not be required to use one of the two topics you list for this homework assignment.