**Biosphere: Biomes Test Review**

**Answer on separate sheet of paper**

1. Certain biomes exist at different lines of latitude. Draw the globe, labeling the important lines of latitude. In your picture, show the three major wind cycles, indicating what biomes exist in each area (and indicate why).
2. Describe the rain shadow effect, using a real-life example to help you explain it.
3. As far as biomes are concerned, what are the TWO major abiotic factors that influence what a biome looks like?
4. How are a tundra and a desert similar to one another? How are they different?
5. Why, in a desert, would plants be succulent (fleshy, no leaves)? How does this differ from the large, green broadleaf plants of a tropical rainforest?
6. What is the difference between deciduous and coniferous?
7. Why are coral reefs considered to be the tropical rainforests of the oceans (give 3 examples)?
8. What is upwelling? Why is it necessary in aquatic biomes?
9. El Nino, a phenomenon occurring in the tropical regions of the Pacific Ocean, has dramatic and negative effects on aquatic biomes and has even been linked to diseases like cholera and yellow fever. Explain what El Nino is, describe the negative environmental effects and provide a link between El Nino and the aforementioned diseases.
10. Why are coral considered to be a keystone species?
11. Coral reefs are part of the Coastal Zone. Provide three descriptions about this coastal zone.
12. Describe the mutualism relationship between coral and algae (who benefits and how). Why is it mutualism?
13. Describe coral bleaching. Why is it an example of a positive feedback loop?
14. A species of coral thrives between the temperatures of 30oC and 40oC, while in any other temperatures will perish. Using the words “Zone of Tolerance,” “Stress Zone,” “Limiting Factor” and a bell curve, describe this scenario.
15. What is a barrier island? What is the purpose of a barrier island?
16. Describe the conditions in an intertidal zone. How do species living in this particular area adapt to their environment (give two examples)?
17. Describe the conditions in the following open ocean zones: euphotic zone, bathayal zone, abyssal zone.
18. What is chemosynthesis (explaining what is used in this reaction) and why certain species use it?
19. What are some limiting factors in the open ocean?
20. What is an estuary, and why are they important to preserve (using mangroves as a specific example of an estuary)?
21. How is a freshwater source defined? Give four examples of freshwater ecosystems.
22. Draw a picture of a lake, labeling the four major zones with one sentence describing each zone.
23. What is the difference between a eutrophic lake and an oligotrophic lake (compare 4 different aspects of the lakes that will distinguish them).
24. In the summer and winter, most freshwater lakes experience a thermocline. Explain what this is, and why it is not present in the other two seasons.