

# GEOG 101 STUDY GUIDE

## EXAM 05 – THE LIVING EARTH

### Readings due:

*Physical Geography*, Mason et al., units 20-26

### Questions for review:

1. What is soil important to study? How do we define soil?
2. What is a pedon? What is a soil horizon?
3. How do we measure soil color and what can different colors tell us?
4. What is soil texture? What do we call a soil with a good balance of grain sizes?
5. What is pH? How does the scale work? What does “low pH” mean? What about “high pH?”
6. How can soil be eroded?
7. Explain the development of oxisols. What makes them unique from other soil orders? Where do we find them and can they be used for agriculture?
8. Explain the development of aridisols. What makes them unique from other soil orders? Where do we find them and can they be used for agriculture?
9. Explain what happened at the Kesterson Wildlife Refuge in the late 1970s – early 1980s.
10. What is biogeography?
11. Define ecosystem and ecology.
12. How is overfishing a complex problem?
13. What is a food chain? How is it different from a food web?
14. Define producer, autotroph, consumer, primary consumer, secondary and tertiary consumer, herbivore, carnivore, omnivore, detritivore, and decomposer.
15. What are the environmental problems with eating meat? Why can't your professor give meat up? Why does he think you should?
16. Define habitat and niche.
17. How do abiotic factors influence ecosystems? Give at least three examples.
18. What are the two forms of competition discussed in class? Give examples from nature.
19. What is mutualism? Give an example from nature.
20. Define primary succession.
21. How is secondary succession related to wildfires in California? How is it related to slash and burn agriculture?
22. Explain the concept of evolution. How does the Theory of Natural Selection explain how it works in nature? What was Darwin's contribution and what key part of the process have we learned about since his time? How does artificial selection help explain evolution?
23. Define species, variation, DNA, gene pool, and mutation.
24. How can mutations be good for evolution? Give at least one example.
25. Why does isolation affect evolution?

26. Why is biodiversity so important?
27. What is a biome?
28. What is an exotic species? Give one example.
29. Explain the formation of the Tropical Rainforest biome. Where do we find it? Connect it to climate, soil, and its unique ecosystem adaptations.
30. Explain the formation of the Mediterranean Scrub biome. Where do we find it? Connect it to climate, soil, and its unique ecosystem adaptations.
31. Explain the formation of the Desert biome. Where do we find it? Connect it to climate, soil, and its unique ecosystem adaptations.
32. What is geoengineering and how are some scientists planning to use it to combat climate change?

Don't forget your Scantron form and #2 pencil!