

Ecology Review

1. How do bees communicate?
2. Give an example of sign stimulus
3. What is the difference between proximate and ultimate cause?
4. What is the difference between
 - a. Operant conditioning
 - b. Innate behavior
 - c. Imprinting
 - d. Altruistic behavior
5. What is optimal foraging?
6. What causes wind currents, ocean currents, and differential heating of the Earth's surface?
7. What are important climatic factors for terrestrial plants?
8. What is phototropism?
9. What is the difference between kinesis and taxis?
10. What limits productivity in deep water?
11. Know your survivorship curves (Humans, squirrel, mussel)
12. What are the three different dispersion patterns?
13. What is density, relating to population?
14. In 2008 Kenya had 450,000 people. They grew by 2.3%, find the population in 2009.
(Hint: 2.3% \rightarrow .023 for r in formula)
15. Given a death rate and birth rate find population for next year given current.
16. What is a main cause for a population moving from exponential to logistic growth?
17. Given the logistic growth equation, what happens when $K=N$?
18. What is the difference between iteroparous and semelparous?
19. What is the difference between r and K selected species?
20. Know the difference between, examples of, and the \pm of
 - a. Commensalism
 - b. Parasitism

- c. Competition
- d. Mutualism
- e. Facilitation

21. What is the difference between cryptic and aposematic coloration?
22. What is a keystone species?
23. Which population is more diverse and why? Population A = .25 x, .25 y, .25z, and .25 g;
Population B = .88 x, .02y, .02z, .02g, and .02p.
24. Why is the benthic ocean biome the most stable?
25. What is another term for herbivores, carnivores, and primary consumers?
26. What two things are necessary to recycle nutrients?
27. What is the difference between net primary production and gross primary production?
28. Owl eats 6000J of rats. Defecates 3000j in feces. Uses 2500J for cellular respiration.
What is its' efficiency?
29. How much energy is lost between trophic levels?
30. Why does a vegetarian have a smaller ecological footprint than a carnivore?
31. What trophic level is most susceptible to extinction?
32. How are humans altering the biochemical cycles?
33. Where can carbon be found? (four sources)
34. Which cycle involves the weathering of rocks?
35. What do bacteria do in the nitrogen cycle?
36. What biome has the most diversity?
37. What is the main cause of the extinction vortex? (discuss diversity)
38. What is biological magnification?
39. Rest is graphs and extenstions
40. Enjoy!!!!