Population Ecology Study Guide

1. List the three different types of ecology

2. Define “population”

3. What two types of data do we need to study population ecology

4. Define “fecundity”

5. What is the difference between density dependent and density independent limiting factors

6. Give three examples of density dependent limiting factors

7. Give three examples of density independent limiting factors

8. Define “carrying capacity”

9. Compare exponential and logistic growth

10. Sketch the graph shape of population growth for an “R” species

11. List three examples of “R” species

12. Sketch the graph shape of population growth for a “K” species

13. List three examples of “K” species

14. Given the following scenarios, calculate the rate of population growth

Scenario 1	Scenario 2	Scenario 3
Births = 100 Deaths = 20 Original Population Size = 1,000	Births = 350 Deaths = 12 Original Population Size = 3,576	Births = 10,001 Deaths = 2,000 Original Population Size = 320,000

15. Biologically speaking are humans "R" species or "K" species

16. When graphed, do humans exhibit exponential or logistic growth

17. List three reasons humans populations do not "crash" when they reach the carrying capacity

18. What is the estimated carrying capacity for humans on Earth

19. When did the rate of human growth peak

20. Why has the rate of human population growth been decreasing

21. Compare direct population counts and indirect population counts

22. What kind of count would you use for counting trees in a forest

23. What kind of count would you use for counting deer in a forest

24. Given the following scenarios, calculate the CHANGE in population

Scenario 1	Scenario 2	Scenario 3
Births = 100 Deaths = 20 Emigration = 200 Immigration = 1,000 Original Population Size = 1,000	Births = 35 Deaths = 120 Emigration = 1,000 Immigration = 975	Births = 350 Deaths = 0 Emigration = 0 Immigration = 200