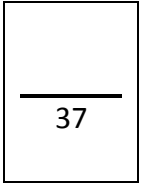


# Ch 4 Overview: Population Biology



## Section 4.1 – Population Dynamics

1. What is a population? (½ pt)
2. What happens within a healthy population? (½ pt)
3. What can negatively affect a healthy population? (1 pt)
4. Explain one way scientists study changes in populations? (1 pt)
5. What would scientists use to study larger organisms such as elk? (½ pt) \_\_\_\_\_
6. What type of curve do populations of organisms experience? (½ pt) \_\_\_\_\_
7. Why is the initial increase of organisms slow? What causes the greater increase later on? (1 pt)
8. What is exponential growth? What does it result in? (1 pt)
9. List the 4 factors that can limit population growth. (2 pts)
10. What type of growth curve will result due to limiting factors? (½ pt) \_\_\_\_\_
11. What is carrying capacity? (½ pt)
12. When would limiting factors come into play? (½ pt)
13. What is a life-history pattern? (½ pt)
14. What are the 2 types of life-history patterns? Give an example of each. (2 pts)
15. Where would rapid life-history patterns be common? (½ pt)

16. Describe typical organisms that have a rapid life-history. (2 pts)
17. Where would slow life-history patterns be common? (½ pt)
18. Describe typical organisms that have a slow life-history. (2 pts)
19. What are limiting factors? (½ pt)
20. List the 3 types of dispersal methods of organisms. (½ pt)
21. List the 2 kinds of limiting factors that are related to dispersal. (½ pt)
22. List 5 density-dependent factors. (2½ pts)
23. List 7 density-independent factors. (3½ pts)
24. Why can predation be a limiting factor? (½ pt)
25. What happens when organisms within the same population compete for resources? (½ pt)
26. List the stress symptoms that individual organisms can exhibit in times of overcrowding. (2pts)

**Section 4.2 – Human Population**

27. What is demography? (½ pt)
28. By 2002, how fast has the human population grown per year? (½ pt) \_\_\_\_\_
29. How have humans been able to increase their growth? In other words, what limiting factors have we dealt with? (2pts)

30. List the 4 factors that affect population growth rate. (½ pt)

31. What is immigration? (½ pt)

32. What is emigration? (½ pt)

33. What is the complete formula for population growth rate (PGR)? (½ pt)

34. What is doubling time? (½ pt)

35. A country that has a slow double time is often referred to as a \_\_\_\_\_ (½ pt)

36. A country that has a rapid double time is often referred to as a \_\_\_\_\_ (½ pt)

37. What is age structure? (½ pt)

38. What can an age structure graph tell you? (1 pt)

39. List the basic needs of resources for populations. (1½ pt)