Name

Chapter 4.1 Population Dynamics Questions from Notes

Use your chapter 4.1 notes to answer the following questions

- Do not make up your own answers- use the information in your notes!
- Do not answer a question without first reading your notes!
- Answers must be in complete sentences

1. What three characteristics do populations have in common?

2. Tigers like to have a certain distance between them and other tigers. What kind of dispersion pattern do they follow?

3. Prairie dogs live in family units in underground burrows. What kind of dispersion pattern do they follow?

4. Compare AND contrast the exponential and logistic population growth models

5. A scientist is studying population growth patterns of roaches. He sends a small group of roaches to the moon, and periodically sends enough food to the moon so that the roaches never run out. Which of the two growth models do you think the roach population will follow? WHY?

6. Why are humans considered to have a wide population range?

7. Polar bears are found in the arctic. Why are they considered to have a narrow population range?

8. What limits the range of a population?

9. Identify the two kinds of population limiting factors.

10. Compare AND contrast density dependent and density independent limiting factors.

11. For species that employ the r strategy, how does employing the r strategy help them (meaning, what is this an adaptation to)?

12. For species that employ the k strategy, how does employing the k strategy help them (meaning, what is this an adaptation to)?

13. Explain why the populations of r strategists never reach carrying capacity (hint- what kind of environments do they live in?)

14. Explain why the populations of k strategists usually hover around carrying capacity (hintwhat kind of environment do they live in?)

15. Why do species that employ the k strategy tend to have more success getting their offspring to reproductive age than r strategists?

16. There is a drought in an area in which white tail deer live. Classify the drought as a density dependent or density independent limiting factor. **Explain your choice.**

17.Select a density dependent factor and describe what effect it will have on white tail deer population.

Now use your chapter 3.1 notes to answer the following questions.

18. Compare AND contrast primary and secondary ecological succession.

19.Describe how soil is created in primary succession.

20.Explain why scientists believe that true climax communities cannot be achieved.

21.Explain why, in areas of secondary succession, small plants can be the pioneer species, and lichens are not needed.

22.Studies have shown that in order for the population of herbivore X to function at its optimum level, there should be no more than 40 and no less than 15 predators that feed on this herbivore in the area. This is an example of the ______ for herbivore X.



Date

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Name		_ Date		Class
Study Guide	HAPTER 4 Section 1: Popula	tion D	ynamics	
In your textbook, read about popu	lation characteristics.			÷
Use each of the terms below only onc	e to complete the passage.			
carrying capacity population density	density dependent randomly	densit spatia	y independent l distribution	growth rate
Some characteristics that all popula	ations have include (1)	1		,
(2)	, and (3)		Po	opulations tend to
be dispersed (4)	, unifor	mly, and	in clumps. Popula	tions also tend to
stabilize near the (5)	of t	heir envi	ronment. Factors	that limit populations
are either (6)	or (7)			
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16. Competition can occur within a species or between two different species.

Unit 1

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Study Guide, Section 1: Population Dynamics continued

In your textbook, read about population growth rate.



Refer to Figures 1 and 2. Respond to each statement.

17. Identify the type of growth rate demonstrated in Figure 1.

18. Identify the type of growth rate demonstrated in Figure 2.

19. Tell which type of growth rate comes first.

In your textbook, read about reproductive patterns.

Identify the following as being either an r-strategist or a k-strategist.



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