

**CHAPTERS 42–43** *Approximately 75% of this assignment is due in class on Thursday, February 14, 2019*  
*The completed assignment, in its entirety, is due Friday, February 15, 2019*

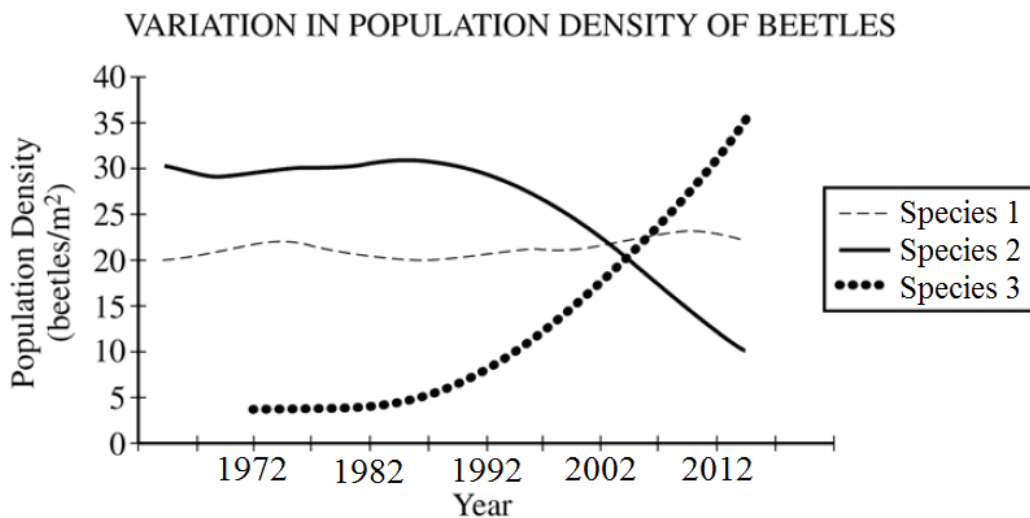
Read Hillis Chapters 42 and 43. Answer the following concept questions in complete sentences:  
 Concept 42.1 (questions 1 & 2); Concept 42.3 (questions 1 & 2); Concept 42.4 (question 2);  
 Concept 42.5 (questions 1 & 2); Concept 43.2 (question 2); Concept 43.4 (all questions); Concept 43.5 (both questions)

**CHAPTERS 44–45** *Approximately 75% of this assignment is due in class on Monday, February 25, 2019*  
*The completed assignment, in its entirety, is due Tuesday, February 26, 2019*

Read Hillis Chapters 44 and 45. Answer the following concept questions in complete sentences:  
 Concept 44.1 (all questions); Concept 44.2 (question 3); Concept 44.3 (question 3); Concept 44.4 (both questions);  
 Concept 45.2 (questions 1 & 3); Concept 45.3 (all questions); Concept 45.6 (both questions)

**ESSAY 2** *Due Friday, March 1, 2019*

Answers must be written out in paragraph form. Outline form is not acceptable. Labeled diagrams may be used to supplement discussion, but a diagram without a written explanation will not receive credit. You must cite the source of all information you mention. Include the page number of information from the textbook or the web address of information found online.



Fossil records suggest that two herbivorous species (1 and 2) of the Cerambycidae longhorn beetle family have existed on an isolated island in the Pacific Ocean for over 20,000 years. In 1972 a third species of herbivorous longhorn beetle (species 3) was accidentally introduced on the island. The population size of each species has been regularly monitored as shown in the graph above.

- (a) **Calculate** the population growth rate in  $\frac{\text{beetles}}{\text{m}^2 \times \text{year}}$  from 1992 to 2012 for species 1, 2, and 3.

**Show all work** and **interpret** the meaning of the final answer for each species.

- (b) **Propose** TWO explanations to account for the observed pattern of growth in species 3.
- (c) **Describe** the effect that the introduction of beetle species 3 has had on the population density of species 1 and the population density of species 2. **Propose** an explanation for the patterns of population density observed after 1972 in species 1 and in species 2.
- (d) **Predict** the population density in  $\frac{\text{beetles}}{\text{m}^2}$  of species 3 in 2022. **Justify** your prediction with a biological explanation.

**CHAPTER 46**      *Approximately 75% of this assignment is due in class on Monday, March 4, 2019  
The completed assignment, in its entirety, is due Tuesday, March 5, 2019*

Read Hillis Chapter 46. Answer the following concept questions in complete sentences:  
Concept 46.1 (question 1); Concept 46.2 (question 2); Concept 46.3 (question 2)

**CHAPTER 29**      *Approximately 75% of this assignment is due in class on Monday, March 11, 2019  
The completed assignment, in its entirety, is due Tuesday, March 12, 2019*

Read Hillis Chapter 29, and answer the following concept questions in complete sentences:  
Concept 29.1 (questions 2 & 3); Concept 29.2 (question 1); Concept 29.3 (question 1);  
Concept 29.4 (question 2)

**CHAPTER 30**      *Approximately 75% of this assignment is due in class on Monday, March 18, 2019  
The completed assignment, in its entirety, is due Tuesday, March 19, 2019*

Read Hillis Chapter 30, and answer the following concept questions in complete sentences:  
Concept 30.1 (all questions); Concept 30.2 (questions 1 & 2); Concept 30.3 (question 2);  
Concept 30.4 (both questions)

**STUDY PLAN**      *Due Thursday, March 21, 2019*

Create a detailed study plan and calendar for how you will use the four weeks between March 22 and May 14 to prepare for the AP Biology Exam.

**CONFERENCE**      *By appointment; must be scheduled before Friday, March 22, 2019*

Answer the following questions in complete sentences:

1. Discuss your progress in AP Biology so far. What are you most proud of? Where do you need to improve?
2. Describe your goals for the remainder of the course and the AP exam. What score do you think is realistic for you to obtain on the exam? What specific steps will you take to accomplish this goal?
3. Describe how this course has changed your perspective on biology. How do you view biology—or science in general—differently than you did before starting AP Biology?
4. Describe how AP Biology has informed your understanding of how college courses are different from high school courses.

Schedule an appointment for a 5-minute midterm conference with me, at which time you will submit your written reflection. You are strongly encouraged to schedule your meeting as early in the semester as possible.