**Chapter 51 Reading Guide**

**-Animal Behavior-**

***Section 1***

1. What is behavioral ecology?

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1. What is a fixed action pattern (FAP)? Give an example.

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1. What is migration?

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1. Nicholas Tinbergen’s work with the stickleback fish is a classic study. Explain what he found, using the terms fixed action pattern and sign stimulus in your response.

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1. Explain what is meant by a circadian clock and circadian rhythms. Refer to chapter 40 or 49 and provide an example.

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1. Animals communicate in various ways. Discuss at least three specific examples, using different organisms. (Don’t talk about fruit flies only!)
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   2. \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
   3. \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
2. What are pheromones?

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1. Provide an example of how organisms respond to pheromones.

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***Section 2***

1. What is the difference between an innate and a learned behavior?

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1. Describe the process of imprinting, using the terms “sensitive” or “critical period” in your response.

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1. What occurs in spatial learning?

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1. Explain what occurs in classical conditioning.

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1. Explain what occurs in operant condition.

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1. What is congnition?

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1. Provide an example that demonstrates how animals are cognizant.

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1. Provide an example how animals participate in social learning.

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***Section 3***

1. What is foraging behavior?

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1. Explain the following mating systems:
   1. Promiscuity- \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
   2. Monogamy- \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
   3. Polygamy- \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
   4. Polygyny- \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
   5. Polyandry- \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
2. Look back to chapter 23- what is sexual selection?

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1. What are the two types of sexual selection? Explain the difference between them.

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1. What is agonistic behavior?

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***Section 4***

1. Explain how the *fru* gene demonstrates a genetic basis for behavior.

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1. Define altruism.

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1. Identify an organism that demonstrates altruistic behavior, and how that behavior is evolutionary advantageous. (Hint: Reference Hamilton’s Rule)

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