Animal Behavior Concepts Methods and Applications 2nd edition Nordell Test Bank

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TESTBANK for Animal Behavior: Concepts, Methods, and Applications 2E

Chapter 1 – The Science of Animal Behavior

Multiple Choice Questions

1. In response to moderate winds, many small spiderlings climb high in vegetation and release several strands of silk that form a "parachute." The spider is then lifted into the air by the wind and drifts to a new location, a phenomenon known as "ballooning." Which of the following is true?
   a. The movement associated with ballooning would not be considered a behavior because it is not internally coordinated CORRECT
   b. Ballooning would not be considered a behavior because it is not externally visible
   c. Spider movement associated with ballooning would not be considered a behavior because it occurs in response to changing conditions
   d. The movement associated with ballooning would not be considered a behavior because it is not an activity pattern
   e. The movement associated with ballooning would not be considered a behavior because only some spiders exhibit this activity

2. Which of the following would NOT be included in an ethogram?
   a. Sleeping duration
   b. Stereotypic behaviors
   c. Feeding frequency
   d. Hormone profiles CORRECT
   e. Fighting behavior

3. Which of the following would NOT be included in an ethogram?
   a. The number of times the animal ate fruit
   b. The level of estrogen throughout the day CORRECT
   c. The levels of aggressive behavior displayed
   d. The length of time the animal spent grooming itself
   e. The rate of calling behavior

4. Ethograms allow a researcher to calculate which of the following?
   a. A time budget CORRECT
   b. The fitness of an individual
   c. Adaptive behavior
   d. Selection on a behavior
   e. Density-dependent selection on a behavior

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5. Which of the following is NOT a formal part of the scientific process?
   a. A prediction
   b. Assumptions
   c. A research question
   d. Hypotheses
   e. Causality CORRECT

6. Which of the following approaches would provide the strongest test of the hypothesis that the density of individuals affects aggression?
   a. A controlled experiment that varies aggression by manipulating hormone level
   b. A controlled experiment that varies density and records aggression CORRECT
   c. A correlation between aggression and density across many populations
   d. Observations of aggression over a season as density varies
   e. A demonstration that aggression is highest just before the breeding season

7. Which of the following is in correct temporal sequence?
   a. Research hypothesis, test, prediction, research question
   b. Research hypothesis, Prediction, Research question, Test
   c. Prediction, test, research hypothesis, research question
   d. Test, research question, prediction, research hypothesis
   e. Research question, research hypothesis, prediction, test CORRECT

8. A researcher tested the hypothesis that hoverflies prefer to feed on white-colored flowers. She presented flies with an equal number of red, blue, and white flowers and recorded their visitation behavior. She found that bees did not exhibit a preference for any color. This is an example of:
   a. Alternate results
   b. A nondirectional hypothesis
   c. Negative results CORRECT
   d. Causality results
   e. A scientific theory

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9. Which of the following is a significant criticism of anthropomorphic thinking to explain behavior?
   a. Anthropomorphic thinking is prevalent in the media
   b. Animals do not experience emotions commonly incorporated into anthropomorphic thinking
   c. Correlation does not imply causality in anthropomorphic thinking
   d. Anthropomorphic thinking rarely produces testable predictions CORRECT
   e. Anthropomorphic thinking does not include frequency-dependent selection

10. Which of the following is an example of an alternate hypothesis?
   a. Can juvenile fish learn the identity of predators from chemical cues?
   b. Juvenile fish learn to identify predators faster than adult fish. CORRECT
   c. Juvenile and adult fish learn to identify predators at the same rate.
   d. Identifying predators is an adaptation.
   e. Do juvenile fish respond to different predators than adult fish?

12. The larvae of stream caddisflies graze on algae in streams and defend territories from other individuals. A researcher observed that in streams with low algae abundance, caddisflies tended to defend large territories, while in streams with high algae abundance, individuals tended to defend small territories. Territory size was intermediate in streams with moderate levels of algae. What can you conclude from these data?
   a. Territoriality in this species functions to prevent starvation
   b. Caddisfly size affects territory size
   c. Algae abundance affects territory size in caddisflies
   d. The environment affects territory size in caddisflies
   e. Algae abundance is correlated with territory size in caddisflies CORRECT

11. The field of behavior that studies behavior independent of animal mental states or consciousness is known as
   a. Comparative psychology
   b. Behaviorism CORRECT
   c. Classical ethology
   d. Behavioral ecology

12. A study examining the stimulus-response behavior of a pigeon would be an example of
   a. Behavioral ecology
   b. Classical ethology
   c. Behaviorism CORRECT
   d. Comparative psychology

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13. Who formalized the distinction between proximate and ultimate explanations of behavior?
    a. E. L. Thorndike
    b. Charles Darwin
    c. George Romanes
    d. C. Lloyd Morgan
    e. Niko Tinbergen CORRECT

14. Which of the following is not considered to be a comparative psychologist?
    a. Niko Tinbergen CORRECT
    b. C. Lloyd Morgan
    c. E. L. Thorndike
    d. Margaret Floy Washburne
    e. George Romanes

15. Who shared the Nobel Prize in Physiology and Medicine "for their discoveries concerning organization and elicitation of individual and social behavior patterns"?
    a. Charles Darwin, Alfred Russell Wallace, and Georges Romanes
    b. B. F. Skinner, John Watson, and Ivan Pavlov
    c. E. L. Thorndike, Margaret Floy Washburne, and C.Lloyd Morgan
    d. Karl von Frisch, Niko Tinbergen, and Konrad Lorenz CORRECT

16. A research study quantifies the fitness of individuals that defend territories of different size and finds that individuals that defend a territory of 10 m^2 have the highest fitness. This is an example of:
    a. Use of parsimony to explain territorial behavior
    b. A proximate explanation of territorial behavior
    c. Use of the comparative method to understand territorial behavior
    d. An ultimate explanation of territorial behavior CORRECT
    e. Phylogenetic analysis of territorial behavior

17. A researcher observed variation in plasma testosterone hormone levels in birds that was associated with variation in aggression: birds with higher levels of testosterone were more aggressive. In addition, experimental addition of testosterone increased an individual's level of aggression. Which of the following is correct about this work?
    a. It is a proximate explanation of behavior CORRECT
    b. The results contradict Morgan's canon
    c. An ethogram of this species should include testosterone level
    d. It builds on the work of Ivan Pavlov
    e. It exemplifies the comparative method

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Short answer

1. Define hypothesis and explain why it is critical to the scientific process.

   ANSWER – A hypothesis is an explanation that makes a prediction. The scientific method is based on the formulation and testing of hypotheses to answer research questions. Other disciplines do not test predictions from hypotheses.

2. Define animal behavior.

   ANSWER – An internally coordinated, externally visible pattern of activity that responds to changing external or internal conditions.

3. Describe the difference between proximate and ultimate explanations of behavior. Use human infant crying as an example.

   ANSWER - Proximate explanations focus on understanding immediate causes and development of behavior. Ultimate explanations focus on understanding the function and evolution of behavior. Human crying: proximate explanations include hunger, discomfort and separation from an adult. Crying begins at birth, increases over six weeks and then declines. Crying is most often associated with separation from a caregiver. Ultimate explanation: crying is a form of communication. It occurs in many primates as a form of communication.

4. What data indicated that dogs do not feel "guilty" when they disobey their owner?

   ANSWER – Dog exhibited the guilty look most often after being scolded by their owner, independent of whether they did or did not obey their owner's command.

5. Define anthropomorphism and explain why such explanations for behavior are problematic.

   ANSWER – Anthropomorphism is the tendency to attribute human motivations, characteristics and emotions to animals. Such explanations of behavior are difficult to test.

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In class activity

1) Scientific Process 1.1 results were displayed in a point graph while those in Scientific Process 1.2 were displayed as a bar graph. Explain why different graphs are used in each of these cases.

ANSWER – In Scientific Process 1.1, the data on the X axis (number of worms) was a continuous variable and so a multitude of values are possible. In Scientific Process 1.2 the data on the X axis (yards with cats, yards without cats) was categorical so that all yards could be either of the two classifications.

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