

CHAPTER 53: Animal Behavior

1. Define the two basic types of behavior.

2. Compare and contrast instincts and reflexes (from the nervous system).

3. What is a fixed action pattern? How does a releaser affect it?

4. Define each of the following terms:

a. imprinting – _____

b. habituation (adaptation) – _____

c. classical conditioning – _____

d. operant conditioning – _____

e. agonistic behavior – _____

f. dominance hierarchy – _____

g. altruistic behavior – _____

5. Explain the difference between proximate and ultimate causes of behavior.

6. Explain the difference between taxis and kinesis.

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7. What is a habitat?

8. List an advantage and a disadvantage of defending a territory.

9. What are pheromones and how do they help in communication?

10. List other means by which animals communicate...

11. What are circadian rhythms and who are they of adaptive value?

12. Explain the evolutionary adaptation of inclusive fitness.

END OF CHAPTER 53 MULTIPLE CHOICE

1. In a deprivation experiment, young animals are reared
 - A) with only young, naive individuals of their own species.
 - B) with conspecifics of all ages, but in a limited environment.
 - C) so that they have no experience relevant to the behavior being studied.
 - D) in an environment that lacks the conditions that would stimulate them to perform the behavior.
 - E) under conditions that deprive them of food.

2. Which of the following is not a component of the cost of performing a behavior?
 - A) Its energetic cost
 - B) The risk of being injured
 - C) Its opportunity cost
 - D) The risk of being attacked by a predator
 - E) Its information cost

3. Birds that migrate at night
 - A) inherit a star map.
 - B) determine direction by knowing the time and the position in the sky of a constellation.
 - C) orient to a particular point in the sky.
 - D) imprint on one or more key constellations.
 - E) determine distance, but not direction, from the stars.

4. If a bird is trained to seek food on the western side of a cage open to the sky, its circadian rhythm is then delayed by 6 hours, and it is returned to the open cage at noon in real time, it will seek food in the
 - A) north.
 - B) south.
 - C) east.
 - D) west.

5. To be able to pilot, an animal must
 - A) have a time-compensated solar compass.
 - B) orient to a fixed point in the night sky.
 - C) know the distance between two points.
 - D) know landmarks.
 - E) know its longitude and latitude.

6. Which of the following statements about communication is true?
- A) Complex information can be conveyed most rapidly by pheromones.
 - B) Visual signaling is advantageous in complex environments.
 - C) Auditory communication always reveals the location of the signaler.
 - D) An advantage of pheromones is that the message can persist through time.
 - E) The dance of bees is an example of visual signaling.
7. One cost commonly associated with group living is
- A) increased risk of predation.
 - B) interference with foraging.
 - C) higher exposure to diseases and parasites.
 - D) poorer access to mates.
 - E) All of the above
8. The choice of a mating partner may be based on
- A) the inherent qualities of a potential mate.
 - B) the resources held by a potential mate.
 - C) both the inherent qualities of a potential mate and the resources it holds.
 - D) the courtship display of a potential mate.
 - E) All of the above
9. Altruistic behavior
- A) confers a benefit on the performer by inflicting some cost on some other individual.
 - B) confers a benefit both on the performer and on some other individual.
 - C) inflicts a cost both on the performer and on some other individual.
 - D) confers a benefit on an individual other than the performer's offspring at some cost to the performer.
 - E) inflicts a cost on the performer without benefiting any other individual.
10. An animal is said to be eusocial if
- A) group members interact very intensively.
 - B) some group members produce many more offspring than others do.
 - C) a dominance hierarchy exists among group members.
 - D) young individuals remain in the group to help their parents rear other offspring.
 - E) the social group contains sterile individuals.