Lab 11: Animal Behavior Multiple Choice Questions

Questions 1-3 refer to the following graphs.

The data in the graphs represent the frequency with which juveniles and adults of a species of fish are found at different water temperatures. Observations were made of several juveniles in a laboratory tank and of three tagged adults in a reservoir during the summer.
1. The most accurate conclusion to be drawn solely from the graphs is that

(A) adult fish of this species are found more frequently in water at 22 degrees C than are juveniles
(B) fish of this species are found most frequently in water at 20 degrees C
(C) the optimum water temperature for fish of this species is 25 degrees C
(D) the oxygen content of cool water is higher than that of warm water
(E) the oxygen content of warm water is higher than that of cool water

(1999 #104)

2. Which of the following statements about the results is true?

(A) They are invalid, because the data show too much variation.
(B) They are invalid, because part of the experiment was not done in the laboratory.
(C) They are inconclusive, because too few fish were used.
(D) They are inaccurate, because tanks with temperature gradients were used.
(E) They are improperly graphed, because the dependent variable is on the horizontal (x) axis

(1999 #105)

3. The purpose of the study is most likely to

(A) determine the water temperature at which fish of this species spawn
(B) determine the role of fish of this species in the ecosystem
(C) show that juveniles occur in smaller numbers than do adults of the species
(D) demonstrate the effects of adult fish of this species on water temperature
(E) study the relationship between water temperature and habitat selection in fish of this species

(1999 #106)

4. Which of the following can be correctly concluded about the relationship between intestinal length and body size for the organisms in the table?

(A) Carnivores have greater intestinal length relative to body size than do herbivores.
(B) Herbivores have greater intestinal length relative to body size than do carnivores.
(C) Omnivores have greater intestinal length relative to body size than do either carnivores or herbivores.
(D) The smaller the intestinal length relative to body size, the more nutrients are absorbed.
(E) No relationship exists between intestinal length and mode of nutrition.

(1999 #107)
Questions 5-8
The graph below shows changes in population of wild sheep that were introduced to the island of Tasmania in the early 1880’s.

5. The type of population growth represented by that portion of the graph line enclosed in the bracket is most accurately termed
   (A) stable
   (B) exponential
   (C) density-dependent
   (D) arithmetic
   (E) decelerating
   (1999 # 117)

6. The graph indicates that the sheep population is
   (A) growing in excess of its carrying capacity, since fluctuations in population size occurred after 1850
   (B) headed for extinction because of the population explosion about 1930
   (C) regulated by density-independent factors, because there appears to be about a 10-year cycle of sharp declines in size
   (D) shifting from a K-selected strategy to an r-selected strategy
   (E) stable after 1850 under the effects of density-dependent regulating factors
   (1999 # 118)

7. The dashed line on the graph represents the
   (A) maximum population size
   (B) average birth rate
   (C) biotic potential of the population
   (D) carrying capacity of the environment
   (E) point of maximum effect for density-independent factors
   (1999 # 119)
8. In the graphs below, the solid lines represent the original population. The dotted line on which graph best represents the sheep population that would have resulted from a sustained increase in the primary productivity of the environment?

(1999 # 120)