

2005 California Envirothon
Wildlife Test
100 Points

Time to Complete This Test - 35 Minutes

Please write your team number on the top of each page. You may unstaple the test and work on the questions in any order; however, pages should be returned in the correct order. You may chose to split your team and work on several questions at once or work on them together. Please show all work or thought processes if there is doubt regarding your answer. You may receive partial credit if you document valid reasoning for your answer. Some of the questions are hard but there are no “trick” questions.

1. Feeding habits based on species identification from skull, scat, tracks or other display materials, general knowledge of common California wildlife, and understanding of physiological adaptations.

A) Match the display materials with the appropriate species (10 points)

- | | |
|---------------|-----------------------|
| Item #1 _____ | a. Black Bear |
| | b. Badger |
| | c. Deer |
| Item #2 _____ | d. Raccoon |
| | e. Pocket gopher |
| | f. Crow |
| Item #3 _____ | g. Striped Skunk |
| | h. Opossum |
| | i. Ground Squirrel |
| Item #4 _____ | j. Grey Fox |
| | k. Long-tailed Weasel |
| | l. Bobcat |
| Item #5 _____ | m. Harbor Seal |
| | n. Mountain Lion |
| | o. Coyote |

B) Match the display materials with the diet of the species represented (10 points)

- | | |
|---------------|------------------------|
| Item #1 _____ | a. Carnivore |
| Item #2 _____ | b. Herbivore |
| Item #3 _____ | c. Omnivore |
| Item #4 _____ | d. Parasite |
| Item #5 _____ | e. Detrivore/Scavenger |

2. Global warming is expected to affect climate conditions world wide. Name 3 potential effects on wildlife habitats. Identify one wildlife species that will be affected by each of the habitat changes discussed and describe how the species will be affected by the predicted change: (9 points)

1)

a) Habitat change:

b) Species affected

c) Effects on species

2)

a) Habitat change:

b) Species affected

c) Effects on species

3)

a) Habitat change:

b) Species affected

c) Effects on species

3. Identify 2 predators, 2 producers or decomposers, and a primary consumer that could be expected to inhabit the test site or nearby area. Identify their trophic level, primary habitat(s) and food items (or part of a primary producer used by wildlife). (15 points)

Species	Trophic level	Primary habitat(s)	Primary food
1. Predator Name:			
2. Predator Name:			
3. Producer or Decomposer Name:			
4. Producer or Decomposer Name:			
5. Primary Consumer Name:			

4. Identify two species found within California that are or have been listed as threatened or endangered under the Endangered Species Act. Identify reasons for decline and measures taken to conserve the species. (8 points)

Species	Threats or reasons for decline	Measures taken to conserve species or habitats	Results/current status

5. Identify an early seral habitat associated species that may be found in the test area. Evaluate the biological carrying capacity or habitat suitability of the test area for that species and identify a food source, water source, type of cover it needs, and estimate how much space it needs to survive. Identify one management practice that may affect carrying capacity or population size. Identify what effect the practice is likely to have and why. (14 points)

Species	
Food	
Water	
Cover	
Space/patch size	
Practice	
Effects	

6. Identify a late or mature seral habitat associated species that may be found in the test area. Evaluate the biological carrying capacity of the test area for the mature seral species and identify a food source, water source, type of cover it needs, and estimate how much space it needs to survive. Identify one management practice that may affect carrying capacity or population size. Identify what effect the practice is likely to have and why. (14 points)

Species	
Food	
Water	
Cover	
Space/patch size	
Practice	
Effects	

NOTE: Multiple choice questions 7 through 15 may have more than one answer.

7. Which of the following is the only native (non-native in California) marsupial in North America? (1 point)
- Pacific fisher
 - Porcupine
 - Opossum
 - Flying squirrel
 - Antelope
8. Habitat edges have been identified with increased numbers and diversity of species. Edges are not always good. Circle potential side effects from edges in the following statements. (1 point)
- Avian brood parasites like cowbirds are more abundant near edges.
 - Wild animals get cut on sharp edges.
 - Reduces mature seral stage habitat for species dependant on large patches of such habitat.
 - Nest predation by small mammals increases.
9. When building nest boxes for cavity-nesting birds or bats: (1 point)
- Paint or stain the exterior walls of the box.
 - Paint or stain the interior walls of the box.
 - Place a perch on the outside of the box below the hole.
 - Sand the wood smooth on both the interior and exterior walls of the box.
10. Which federal agency is responsible for enforcing regulations pertaining to terrestrial animal species listed as “endangered” or “threatened” under the Endangered Species Act? (1 point)
- Environmental Protection Agency
 - U.S. Fish and Wildlife Service
 - National Park Service
 - U.S.D.A. Forest Service
11. _____ is the term used when food, water, pollution, or predation exceeds the tolerance of a population of plants or animals those results in either a decline of numbers or lack of population growth. (1 point)
- Carrying capacity
 - Competition
 - Limiting factor
 - Zero population growth
 - Compensatory loss
12. Which of the following is a species-specific chemical signal released by the female in some species to attract males, and has been synthetically produced and used in survey traps? (1 point)
- pheromone
 - honey dew
 - spittle
 - urine

13. Introducing a non-native species into a new environment may result in: (1 point)
- a) No noticeable difference after introduction (one species cannot impact the environment and the native species are already well adapted to their environment).
 - b) Minor disruption to the environment, but the native species quickly adapt to the new conditions resulting in a balance between the introduced and native species.
 - c) The introduced species cannot compete with the native species usually resulting in a decline of the introduced species.
 - d) The native species cannot compete with the introduced species usually resulting in a decline of native species.
14. _____ is defined as the wise use of our natural resources. (1 point)
- a) Preservation
 - b) Hunting
 - c) Wildlife habitat improvement
 - d) Conservation
 - e) Ecology
15. Which habitat factors must be considered to meet basic wildlife survival needs? (1 point)
- a) food and water
 - b) food, water, and shelter
 - c) food, water, shelter, and space
 - d) food, water, shelter, space and arrangement
 - e) food, water, shelter, space, arrangement, and species birth rate
16. All rodents in the wild have to chew on bones and horns in order to survive. If they can't find this material, they will die. Describe the cause of death. (1 point)

17. Match terms with their definitions: (Note: Not all terms may have definitions) (10 points)

1	Endemic	a	Disease effects on populations
2	Demographic Stochasticity	b	Variation in birth and death rates to random changes in environment (rainy vs. wet years)
3	Environmental Stochasticity	c	All the plants and animals living in a particular area.
4	Density dependent limiting factor	d	Variation in birth and death rates due to chance occurrences in small populations (e.g. births of litters containing a single sex)
5	Density independent limiting factor	e	A species which is found in a particular area occurs there and nowhere else in the world.
6	Carrying capacity	f	Weather or climate effects on populations
7	Keystone species	g	Stable population that produces surplus animals to maintain population in surrounding area
8	Source population	h	Maximum number of animals of a named species which can live in a named area.
9	Sink Population	i	Species in a system that allow large numbers of other species to persist in a community
10	Community	j	Population in marginal habitat that is dependent upon adjacent populations to sustain breeding population.

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