

**2005 California Envirothon
Wildlife Test
100 Points**

Suggested 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 to the correct order when the test is turned in. 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, as you may receive partial credit.

1. Feeding habits based on species identification from skull, general knowledge of common California wildlife, and understanding of physiological adaptations:

A) Identify the skulls and associated scat and tracks on the table numbered 1 - 5 using the names in the list below. Write the animal's name, habitat (forest, aquatic, marine, plains, meadow, etc.), and whether that animal is an herbivore (H), carnivore (C), or omnivore (O). Identify at least two key features that identify the animal as an herbivore, carnivore or omnivore (your observations are not limited to the skulls, tracks or scats and may be based on general knowledge of wildlife as well). **(20 points)**

- | | | |
|--------------------|-----------------|---------------|
| Black Bear | Badger | Deer |
| Raccoon | Pocket Gopher | Striped Skunk |
| Opossum | Ground Squirrel | Grey Fox |
| Long-tailed Weasel | Bobcat | Harbor Seal |
| Mountain Lion | Coyote | |

	Skull #1	Skull #2	Skull #3	Skull #4	Skull #5
Common Name: (0.5 pt)					
Habitat (0.5 pt)					
H/C/O: (1 pt)					
Key Features: (2 pts)					

2. Draw a diagram of a food web showing at least four trophic (feeding) levels, labeling producers, decomposers, primary, and other consumer levels, and which are herbivores, carnivores, etc. Incorporating the following organisms: fungi, earthworms, termites, vultures, foxes, mice, rabbits, pines, doves, snakes, cougar, grasses, deer, owls, and squirrels. Use arrows to show the associations among the organisms at one trophic level and the next. **(10 points)**

3. Name three agencies or organizations (may be national or local, government or private) with responsibilities for conservation of wildlife and/or their habitats. Identify their mission, objectives or roles in conservation of biodiversity. **(9 points)**

Agency/Organization Name (1pt)	Description of role/accomplishments (2 pts)

4. Identify three actions that you or organizations can do (or not do) that will aid in conservation of wildlife resources. Identify how these actions will affect wildlife directly and indirectly at local and global scales (think globally, act locally). **(6 points)**

Action (1 point)	Effect (1 point)

5. What is West Nile Virus and what are its implications for wildlife? In your answer include effects on biodiversity, food webs, indirect effects of vector control, direct and indirect effects on humans). **(Reference: current events, local news sources, www.fws.gov) (5 points)**

6. California has 248 species on the endangered species list. Name three animal species, the listing status (endangered or threatened), habitat (forest, aquatic, marine, plains, meadow, etc.), threats (why it was listed), conservation actions, and population status (recovering, stable, declining, or extinct). Included at least one species with a population that is recovering or stable due to conservation actions (you may include de-listed species) **(Reference: <http://species.fws.gov>; <http://dfg.ca.gov>) (15 points)**

	Species #1	Species #2	Species #3
Common Name (0.5 pt)			
Listing Status (0.5 pt)			
Habitat (1 pt)			
Threats (1 pt)			
Conservation Actions (1pt)			
Population Status (1pt)			

7. Match terms with their definitions: (30 points)

1	Biome	A	A viceroy butterfly imitates coloring of the monarch butterfly to take advantage of predator's learned behavior toward to bad taste of the monarch
2	Climax ecosystem (Clemenstian theory of succession)	B	Occurs when a chemical becomes more and more concentrated as it moves up through a food chain
3	Endemic	C	All the plants and animals living in a particular area.
4	Exotic	D	Succession completed without human interference. Natural disturbances are inherent in the development and acclimatized or naturalized non-native plant species are included where there are no known methods to control them
5	Biomagnification	E	A species that is found in a particular area occurs there and nowhere else in the world.
6	Bioaccumulation	F	The world's major communities, classified according to the predominant vegetation and characterized by adaptations of organisms to that particular environment
7	Density dependent limiting factor	G	Poisonous or distasteful species adopt similar coloration patterns to take advantage of learned avoidance behavior by predators
8	Density independent limiting factor	H	Maximum number of animals of a named species that can live in a named area.
9	Carrying capacity	I	Increase in the concentration of a chemical in a biological organism over time, compared to the chemical's concentration in the environment
10	Batesian mimicry	J	Vegetation changes as a whole through different life stages and ends up ultimately in a stable ecosystem. Species are interlinked with one another and disturbance interrupts this natural progression to the final stage of development
11	Potential natural community (PNC) concept	K	Animal most active at dusk and dawn
12	Mullerian mimicry	L	Species dependent on tree or forest habitat
13	Community	M	Any animal or plant species that is introduced by humans from one environment or habitat into another where it was not found before.
14	Crepuscular	N	Disease
15	Arboreal	O	Weather

Multiple Choice

E.

8. Which of the following is a Neotropical Migrant that winters in Central and South America? **(1 point)**
 - A. Junco
 - B. Meadow lark
 - C. Spotted owl
 - D. Roadrunner
 - E. Peregrine falcon

9. Which of the following is a marsupial? **(1 point)**
 - A. Pacific fisher
 - B. Porcupine
 - C. Opossum
 - D. Flying squirrel
 - E. Antelope

10. Mast is an important food source for wildlife is produced by: **(1 point)**
 - A. sycamore trees
 - B. manzanita
 - C. oak trees
 - D. gray squirrels

11. Dead trees or snags are beneficial to many wildlife species. Two species that utilize snags are: **(1 point)**
 - A. Pallid bat and mountain bluebirds
 - B. Pileated woodpeckers and Rubber boas
 - C. Porcupines and grey fox
 - D. Spotted owls and Pacific chorus frogs

12. Both raccoons and Virginia opossums are predators of nesting waterfowl. This is an example of **(1 point)**
 - A. niche segregation
 - B. interspecific competition
 - C. compensatory mortality
 - D. competitive exclusion