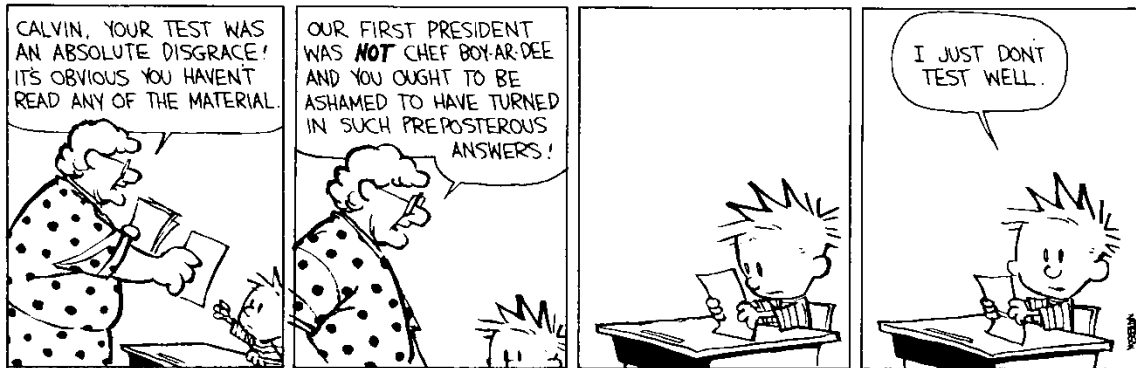


Name _____

BIOL 103 – Fall 2003 – Exam 3



Please do not start until everyone is ready.

1. (12 pts) What was the “dust bowl”? When, where, and why did it happen? What can we learn from this experience?

2. (8 pts) What is soil made out of? How is it formed?

3. (8 pts) Some environmental organizations suggest that reducing meat consumption would be good for the environment. Explain the reasoning behind this suggestion.

4. (8 pts) Farmers using pesticide to kill pests often notice that the pesticides kill fewer of the pests each year. Why might this occur? Explain each step in the process.

5. (8 pts) The two-part scientific name for wolves is *Canis lupus*. What do each of these names indicate? How are they used to classify organisms?

6. (16 pts) What lessons can we draw from each the histories of the species listed below? For each species, write a general statement about wildlife conservation that can be supported by reference to the species. One sentence is sufficient. Then, in 1-3 sentences describe why the history of that species supports your statement. Do not derive lessons that tell people what they should or shouldn't to. For example, do not answer "People shouldn't drive species to extinction." The lesson for each species should be unique. Two examples are given below for elephant seals.

Elephant seal

(Possible answer) *Small populations can recover to large population sizes when overhunting is stopped. Elephant seals were hunted to near extinction in the late 19th century but populations recovered when hunting stopped, and the species is now thriving.*

(Alternative answer) *Biologists had very different priorities in the 19th century than today. In 1882 a Smithsonian expedition to the a remote island off the Mexican coast found 8 elephant seals - a species that was suspected to be extinct - and killed seven of them to add to the Smithsonian's collection.*

Dusky sea side sparrow

Passenger pigeon

Whooping cranes

Bison

7. (8 pts) Why might fragmentation of populations threaten their persistence? Describe two reasons.

8. (8 pts) What lesson has the study of islands provided wildlife biologists for protecting species in parks and wildlife refuges?

9. (8 pts) How does the federal government define “wilderness”? (List 3 criteria) How is wilderness managed compared to other federal lands?

10. (7 pts) Describe the national forest roadless initiative.

11. (9 pts) List three characteristics of “smart growth” and describe three potential drawbacks of such zoning.