

Part 2 – Write (15 points) – Choose one of these quotes and explain (1) what it means and (2) what it means to you.

1. "We abuse land because we regard it as a commodity belonging to us. When we see land as a community to which we belong, we may begin to use it with love and respect." - Aldo Leopold
2. "This we know... the earth does not belong to man, man belongs to earth. All things are connected, like the blood which connects one family. Whatever befalls the earth befalls the children of the earth. Man did not weave the web of life - he is merely a strand in it. Whatever he does to the web, he does to himself." - Chief Seattle, 1854
3. "We are all fools! Blinded with greed, we rape the earth and declare ourselves its masters. We glut ourselves with the riches, cut the forests down like wheat, and jingling our dollars cannot hear the voice of intolerable unrest within us. Beware America! The earth too has a voice which someday we must answer." - Frank Waters, *The Dust Within the Rock*, 1940
4. "Hope and the future for me are not in lawns and cultivated fields, not in towns and cities, but in the impervious and quaking swamps." - Henry David Thoreau
5. "I do have an earnest desire to save the world, and this is something I share with hundreds of thousands (and probably millions) of other people. People seem to have in common an intuitive understanding of what saving the world means. The world is our HOME. It's not just 'the environment.' Saving the world means our children will have a place to grow up -- and their children -- and their children. Failing to save the world means our children will grow up (or fail to grow up at all) in the land of nightmare and catastrophe." - Daniel Quinn
6. "When you start working with the environment seriously, the whole arena comes: human rights, women's rights, environmental rights, children's rights, you know, everybody's rights. Once you start making these linkages, you can no longer do just tree-planting." - Dr. Wangari Maathai, leading African environmentalist
7. (Use both these quotes) "Everyone lives downstream from someone else." -Anonymous  
"Until he extends the circle of his compassion to all living things, man will not himself find peace." - Albert Schweitzer
8. "It's easy to become hopeless. So people must have hope: the human brain, the resilience of nature, the energy of young people and the sort of inspiration that you see from so many hundreds of people who tackle tasks that are impossible and never give up and succeed." - Dr. Jane Goodall, (Relate this to the environment)

Name \_\_\_\_\_

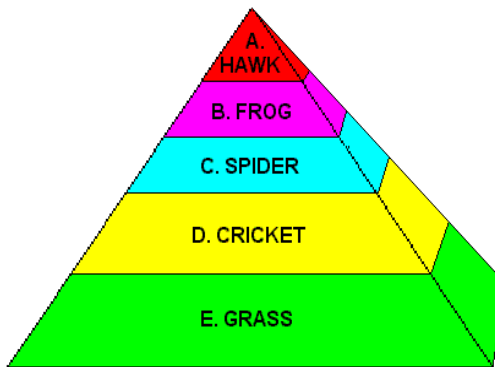
1. What is the study of the environment?
  - A. Biology
  - B. Biodome
  - C. Ecology
  - D. Zoology
  - E. None of the above

**MATCH THE TERM AND ITS DEFINITION:**

- |  |               |
|--|---------------|
| 2. An individual plant, animal or other  | A. Ecosystem  |
| 3. A group of organisms of the same species that live in an area.                          | B. Population |
| 4. Several populations of different species that interact together.                        | C. Biosphere  |
| 5. The interaction of living and non-living things within an environment.                  | D. Community  |
| 6. Latin for "circle of life," this describes the earth or any self-contained environment. | E. Organism   |

**LOOK AT THE FOLLOWING ENERGY PYRAMID**

7. Which of the above is a producer?
8. Which is a 4<sup>o</sup> (fourth degree) consumer?
9. Which is a primary consumer?
10. Which is a secondary consumer?
11. Which is a herbivore?
12. Which has the most available energy?
13. Which has to work the hardest to get its energy?
14. Which is a 3<sup>o</sup> (third degree) consumer?
15. Which suffers the most from poisons in the environment?



- A. HAWK
- B. FROG
- C. SPIDER
- D. CRICKET
- E. GRASS

16. In regards to question 15, a pesticide meant to kill mosquitoes was found to damage the eggs of eagles. What was that chemical?
  - A. Mad Cows
  - B. DNA
  - C. DDT
  - D. DDS
  - E. PhD

17. What is the source of almost all energy in living things?
  - A. water
  - B. coal
  - C. oil
  - D. natural gas
  - E. solar energy

18. The following is an example of what?

Wheat -----> Mice -----> Foxes -----> Coyotes -----> Vultures

- A. Niche
- B. Habitat
- C. Adaptation
- D. Food Chain
- E. Symbiosis

19. What do we call the place an animal lives?

- A. Niche
- B. Habitat
- C. Adaptation
- D. Food Chain
- E. Symbiosis

20. What do we call the role an organism takes in the environment?

- A. Niche
- B. Habitat
- C. Adaptation
- D. Food Chain
- E. Symbiosis

21. When two animals from two different species interact with each other, what is it called?

- A. Niche
- B. Habitat
- C. Adaptation
- D. Food Chain
- E. Symbiosis

Read the following story and answer the questions

Nothing is quite as stirring and chilling as the howl of a wolf. It's a reminder that we're not at the top of every food chain, and there is still danger in being alone in this world. Before "civilization" came to the west, this was the territory of the wolf, but as more and more people settled down, the places where the wolves roamed and the places where the people invaded overlapped more frequently.

By the 1930s, wolves were viewed as the enemy, and a scourge to eliminate. Wolves occasionally scattered flocks and killed sheep or cattle. Ranchers were particularly opposed to having wolves nearby. During this time, wolves were shot, poisoned and trapped until, in many places, they were no longer found. Even in Yellowstone National Park, a haven for animals, wolves were eliminated. By 1970, no wolves could be found within the borders of the park.

In 1972, congress passed the Endangered Species Act. Part of this act called for re-introduction of wolves into the places where they used to live. This was not acted upon until 1995, when a pack of wolves was captured and brought back into the Yellowstone area. Since that time, the wolves have begun to breed, which is a hopeful sign.

The re-introduction of the wolves has also helped an unlikely species – the grizzly bear. When a pack of wolves kill a large animal, such as an elk, bears will also eat from the carcass. This does not seem to be harming the wolf population, but the bears benefit greatly from the extra source of food.

22. In this story, who are competitors?

- A. Wolves and sheep
- B. Wolves and humans
- C. Wolves and cattle
- D. Wolves and elk
- E. Bears and Elk

23. In this story, what are two predators mentioned?

- A. Wolves and sheep
- B. Wolves and cattle
- C. Wolves and elk
- D. Humans and sheep
- E. Wolves and Bears

24. What relationship do the bears have with the wolves?

- A. Predator-Prey
- B. Parasitism
- C. Commensalism
- D. Mutualism

25. What is the niche of the wolves?

- A. Yellowstone
- B. Secondary Consumers
- C. Humans
- D. Primary Consumers

26. What is the habitat of the wolves?

- A. Yellowstone
- B. Secondary Consumers
- C. Humans
- D. Primary Consumers
- E. Elk

27. When was the Endangered Species Act?

- A. 1930
- B. 1969
- C. 1972
- D. 1995
- E. None of the above

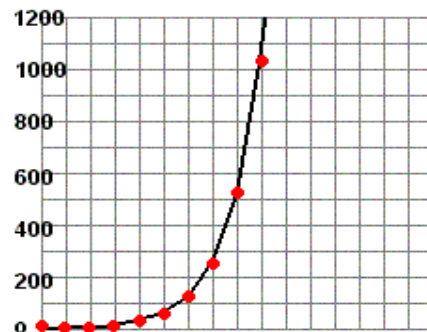
The following is a growth curve for bacteria that are given unlimited resources. Answer the following questions about this curve.

28. What is this type of curve called?

- A. Bacteria curve
- B. "J" Curve
- C. "S" Curve
- D. None of the above

29. How does this compare to the human population curve?

- A. Nearly identical
- B. Very different
- C. Same at first, but it changes at the end
- D. Different at first, but conforms later



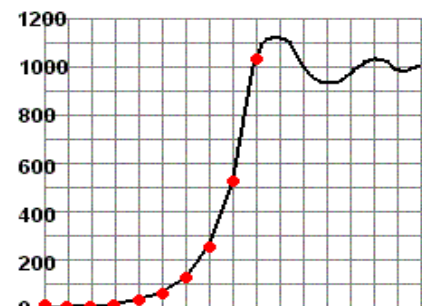
Most populations have a curve that looks like the following:

30. What type of curve is this?

- A. Bacteria curve
- B. "J" Curve
- C. "S" Curve
- D. None of the above

31. Approximately is the carrying capacity for this population?

- A. 0
- B. 500
- C. 1000
- D. 1100



There are three types of symbiosis listed in the text. Parasitism involves one species hurt while the other benefits. Commensalism involves one species benefiting while the other is unharmed, and mutualism involves both species benefiting. In each situation, choose whether it is an example of parasitism, commensalism, mutualism, or none of the above.

- 32. Spanish moss grows on trees in the South. The tree has no problem with this.      A. Parasitism
- 33. Heartworms live inside dogs and often kill them      B. Commensalism
- 34. Birds clean alligator's teeth and get a meal without being eaten      C. Mutualism
- 35. Polar bears live at the north pole and penguins at the south      D. None of these
- 36. Remora fish follow sharks and eat the scraps
- 37. Ticks sometimes give mammals diseases

For each organism listed, choose whether it is mainly a producer, primary consumer, secondary consumer, scavenger or decomposer.

- 38. Frog      A. producer
- 39. Cow      B. primary consumer
- 40. Daisy      C. secondary consumer
- 41. Chicken      D. scavenger
- 42. wolf      E. decomposer
- 43. mushroom
- 44. vulture
- 45. hyena
- 46. squirrel
- 47. bacteria
- 48. apple tree
- 49. cricket
- 50. shrubbery