ECOLOGY
2004 GEORGIA REGIONAL
TRIAL EVENT

Participant(s): _____

<u>Directions</u>: When answering a multiple choice question, circle the letter preceding the phrase that you believe to be the correct response.

1. What are the main conditions that determine the plant life of a given biome?
   A. rainfall and temperature
   B. rainfall and sunlight
   C. sunlight and temperature
   D. altitude and temperature

2. Which of the following levels of study in ecology includes all the others listed?
   A. population
   B. organism
   C. ecosystem
   D. community

3. The carrying capacity of a population is
   A. number of individuals in that population
   B. number of individuals that can be supported by available resources
   C. constant for all populations
   D. fixed for humans only

4. Why are food chains usually relatively short? _____

   _____

   _____

5. Which trophic level will have the largest number of individuals?
   A. secondary consumer
   B. primary consumer
   C. primary producer

6. Which of the following is an example of a population?
   A. all of the organisms on campus
   B. all of the animals on campus
   C. all of the plants on campus
   D. all the squirrels within 1 km of this building

7. Which of the following will usually happen in stabilizing selection?
   A. The trait will become more clustered around the mean.
   B. The trait will become more clustered around one extreme.
   C. The trait will become more clustered around both extremes.
   D. The trait will become evenly distributed among all individuals.

8. An organism that makes its own food is considered a(n)
   A. primary producer
   B. primary consumer
   C. secondary consumer
   D. decomposer

9. Which organism is *least* likely to be found in a coniferous forest?
   A. deer
   B. wood tick
   C. prairie dog
   D. rabbit

An ecologist studied the number of organisms in an area over a three year period and obtained the following results:

Year	Rabbits	Owls	Coyotes
1	220	15	1
2	140	16	0
3	115	14	5

Directions: For the following questions, pick from the following choices
   A. increase in owl population
   B. decrease in owl population
   C. migration of coyotes into area
   D. decrease in number of producers in area

10. What is the best explanation for the decrease in rabbit population from year 1 to year 2?
    _____

11. What is best explanation for decrease in rabbit population from year 2 to year 3?
    _____

12. By what percent did rabbit population decrease from year 1 to year 3?

    _____

Directions: Match the plant with the most likely biome to find it. There is only one answer per biome.

Biome

13. _____ Taiga

14. _____ Tundra

15. _____ Savanna

16. _____ Tropical rain forest

17. _____ Desert

18. _____ Chaparral

19. _____ Temperate deciduous forest

Plant

A. cactus

B. grasses

C. oak, other hardwoods

D. pine trees

E. reindeer moss

F. small bushes with waxy leaves

G. answer not given

Directions: Use the following information in the chart to answer the questions that follow.

Organisms A, B, C, D, are counted in three different areas, and the results appear below.

Area	# A	# B	#C	# D
1	17	6	1	2
2	15	8	9	1
3	8	9	15	9
Total	40	23	25	12

20. What percent of organisms in area 2 are Type A?

_____

21. What percent of the total organisms are Type C?

_____

22. Which area has the greatest biodiversity?

_____