ECOLOGY
2004 GEORGIA REGIONAL
TRIAL EVENT
Answer Key

Directions: The correct responses appear in bold face type.

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?

   (Answer should address the fact that useable energy is lost in going from one trophic level to the next)

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

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?

(D)

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

(c)

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

105/220== about 48%

13-19
Match the plant with the most likely biome to find it. Some answers may be used more than once, others not at all. There is only one answer per biome.

Biome	**Plant**
13. Taiga ***(D)***	A. cactus
14. Tundra (**E**)	B. grasses
15. Savanna ***(B)***	C. oak, other hardwoods
16. Tropical rain forest (**G**)	D. pine trees
17. Desert (**A**)	E. reindeer moss
18. Chaparral (**F**)	F. small bushes with waxy leaves
19. Temperate deciduous forest (**C**)	G. answer not given

Use the following information to answer the following questions

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?
(15/33 about 45%)

21. What percent of the total organisms are Type C?
(25/100= 25%)

22. Which area has the greatest biodiversity?
(3)