Exploring the World of Science

Kraemer Scrimmage November 4th, 2017

Ecology Test

Name _____KEYS_____

School _____

You have 50 minutes to finish. Good luck!

Multiple Choice questions. Please choose the BEST answer (1 point each)

1. A
2. C
3. D
4. C
5. B
6. C
7. D
8. B
9. B
10. C
11. B
12. A
13. A
14. B
15. B
16. D
17. D
18. B
19. D
20. B
21. A
22. C
23. D
24. C
25. C
26. A
27. B
28. A
29. C
30. C

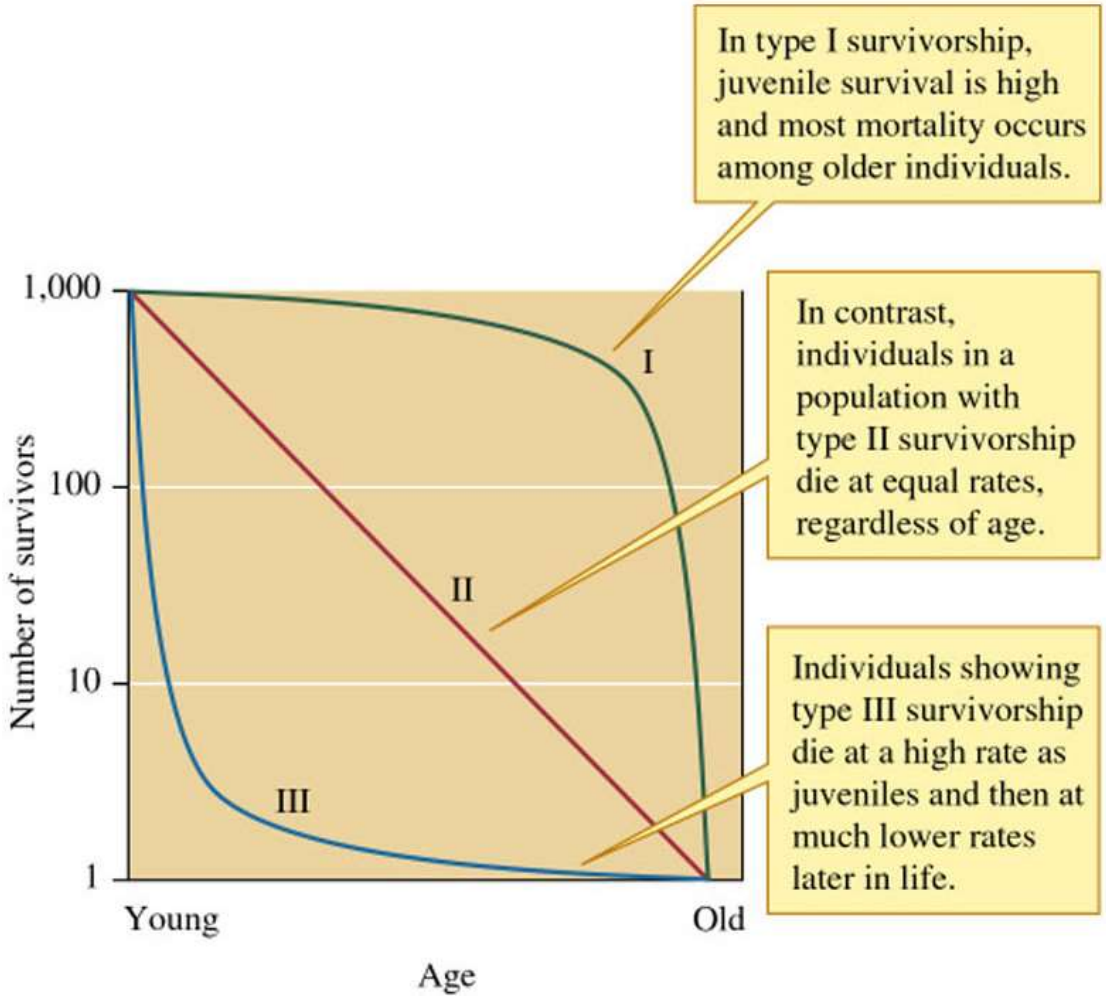
Short answer questions (30 points total).

1. (2 points) Removal of top predator increase the chance of strong competitor to become dominant, therefore decrease species diversity.

2. (2 points) Interspecific competition is the competition between two different species;
Three possible outcomes: 1) one extinct; 2) two co-exist; 3) one species change (evolution);

3. (2 points) Cicadas can sweat & they can "drink" water from plant trunk.

4. (3 points) Summarize and discuss the three survivorship curves, and give examples for each. Feel free to draw a chart to illustrate.



Examples: Type I – humanm ,mammals, Type II – birds, turtles; Type III – plants

5. (2 points) Too low disturbance increases chance of competitive exclusion;
Too high disturbance doesn't give species enough time to colonize and grow, therefore intermediate disturbance increase diversity.
Recent human disturbance is too high – threaten diversity

6. (2 point) Normally 3 – 4 levels. Because energy loss from one level to next. At the top level, not enough energy is left to support.

7. (3 points)

Glacier bay – primary succession;
Forest community – second succession;
Intertidal community – faster species dispersal and growth rate;

8. (2 points)
Using fertilizer
Burn fossil fuel

9. (3 points)

a. Please give possible explanation(s) why the frequency of the recessive trait (*aa)* has not changed over time?

Meet Hardy – Weinberg equilibrium five conditions: Large population, no natural selection, no mutation, no immigration, & random mating

b. what is the estimated frequency of allele *a* in the gene pool?

0.6

c. what proportion of the population is probably heterozygous *(Aa)* for this trait?

0.48