Biodiversity Knowledge Survey
Answers and Themes

Name:

Questions 1-4: True or False

Using a scale of unconfident to confident, please circle how confident you are with your answer

Example: (T/F)	The majority of the earth is covered with water. True	i. Unconfident ii. Somewhat unconfident iii. Neutral iv. Somewhat confident v. Confident

Questions 1 – 4 Test students understanding of the effects of dispersal and drift on species and genetic diversity. In these questions, island size is a surrogate for population/community size; so larger islands are expected to have more species and greater genetic diversity.

1.	(T/F)	Given the same number of species on two islands, the extinction rate of the larger islands will tend to be higher than the extinction rate on the smaller island. **F, DRIFT, SPECIES**	i. Unconfident ii. Somewhat unconfident iii. Neutral iv. Somewhat confident v. Confident
2.	(T/F)	Immigration decreases species richness over time. **F, DISPERSAL, SPECIES**	i. Unconfident ii. Somewhat unconfident iii. Neutral iv. Somewhat confident v. Confident
3.	(T/F)	Immigration into a population helps maintain genetic diversity in that population. **T, DISPERSAL, GENETIC**	i. Unconfident ii. Somewhat unconfident iii. Neutral iv. Somewhat confident v. Confident
4.	(T/F)	Larger populations tend to have more genetic diversity than small populations. **T, DRIFT, GENETIC**	i. Unconfident ii. Somewhat unconfident iii. Neutral iv. Somewhat confident v. Confident

QUESTIONS 5 – 9: Circle the most appropriate answer to fill in the blank(s).

ASSUME EQUAL HABITAT QUALITY AND NO SELECTION

Questions 5-9 Test students understanding of the effects of dispersal and drift on species and genetic diversity. In these questions, island size is a surrogate for population/community size; so larger islands are expected to have more species and greater genetic diversity.

5. Species richness in communities without immigration will _____ over time.

   i. increase
   ii. remain unchanged
   iii. decrease

i. Unconfident
ii. Somewhat unconfident
iii. Neutral
iv. Somewhat confident
v. Confident

3, DISPERSAL, SPECIES

6. Immigration tends to have a _____ effect on the species richness of an island

   i. positive
   ii. neutral
   iii. negative

i. Unconfident
ii. Somewhat unconfident
iii. Neutral
iv. Somewhat confident
v. Confident

1, DISPERSAL, SPECIES

7. Genetic diversity within populations tends to _____ with a (n) _____ in immigration rates.

   i. increase, decrease
   ii. decrease, increase
   iii. increase, increase
   iv. remain the same, increase or decrease

i. Unconfident
ii. Somewhat unconfident
iii. Neutral
iv. Somewhat confident
v. Confident

3, DISPERSAL, GENETIC

8. Large islands will generally have _____ species and _____ extinction rates compared to small islands.

   i. more, higher
   ii. more, lower
   iii. less, higher
   iv. less, lower
   v. none of the above

i. Unconfident
ii. Somewhat unconfident
iii. Neutral
iv. Somewhat confident
v. Confident

2, DRIFT, SPECIES

9. Small populations lose genetic diversity _____ larger populations.

   i. faster than
   ii. slower than
   iii. at the same rate as

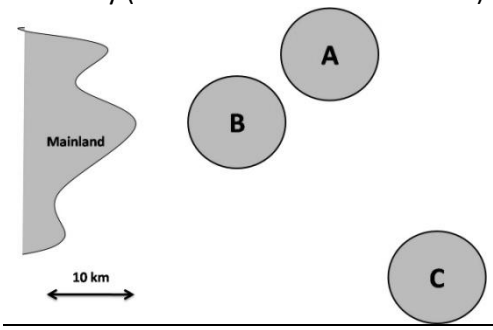
i. Unconfident
ii. Somewhat unconfident
iii. Neutral
iv. Somewhat confident
v. Confident

1, DRIFT GENETIC

QUESTIONS 10-15: Circle the most appropriate answer. ASSUME EQUAL HABITAT QUALITY AND NO SELECTION

Questions 10, 11, and 15 Pertain effect of drift (island size) and dispersal (island connectivity) on species and genetic diversity. Questions 12 – 14 pertain to habitat reserve design, with the idea that larger, more well connected islands would maximize species and genetic diversity over smaller and more isolated islands

10. Rank the following islands in terms of expected genetic diversity (most diverse to least diverse).

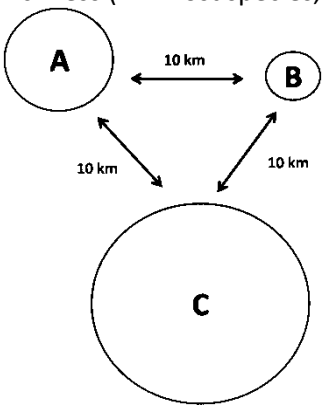


i. A, B, C
ii. A, C, B
iii. B, A, C
iv. B, C, A
v. C, A, B
vi. None of the above

i. Unconfident
ii. Somewhat unconfident
iii. Neutral
iv. Somewhat confident
v. Confident

3, DISPERSAL, GENETIC

11. Rank the following islands in terms of expected species richness (1 = most species, 3 = least species).

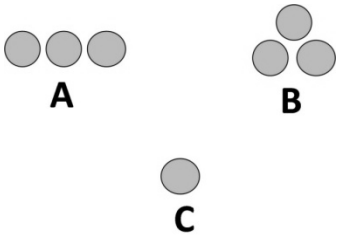


i. A, B, C
ii. A, C, B
iii. B, A, C
iv. B, C, A
v. C, A, B
vi. None of the above

i. Unconfident
ii. Somewhat unconfident
iii. Neutral
iv. Somewhat confident
v. Confident

5, DRIFT, SPECIES

12. Which of the following reserve designs would most likely maximize species and genetic diversity?

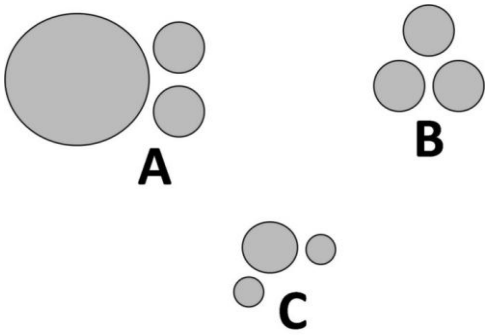


i. A
ii. B
iii. C
iv. A and B
v. None of the above

i. Unconfident
ii. Somewhat unconfident
iii. Neutral
iv. Somewhat confident
v. Confident

2, RESERVE DESIGN, SPECIES AND GENETIC

13. Which reserve design would maximize genetic diversity?

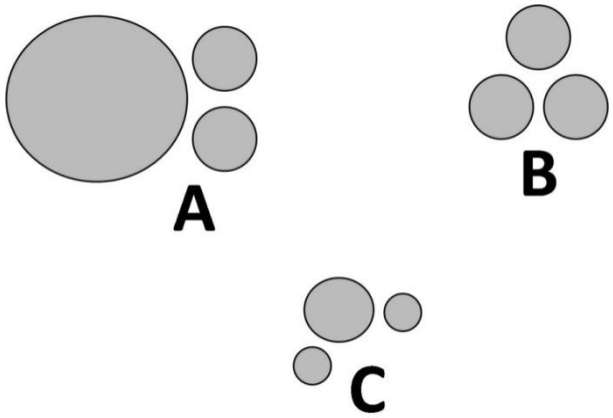


i. A
ii. B
iii. C
iv. A and B
v. None of the above

i. Unconfident
ii. Somewhat unconfident
iii. Neutral
iv. Somewhat confident
v. Confident

1, RESERVE DESIGN, GENETIC

14. Which reserve design would minimize the risk of species extinction?

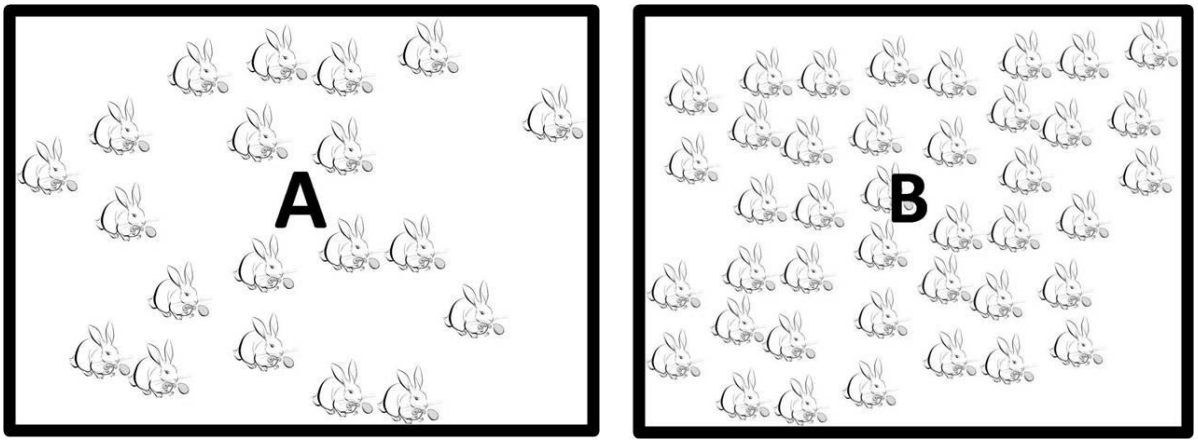


i. A
ii. B
iii. C
iv. A and B
v. None of the above

i. Unconfident
ii. Somewhat unconfident
iii. Neutral
iv. Somewhat confident
v. Confident

1, RESERVE DESIGN, SPECIES

15. Which population of Easter bunnies would you predict would lose genetic diversity faster?



i. A
ii. B
iii. They would likely lose genetic diversity at the same rate.

i. Unconfident
ii. Somewhat unconfident
iii. Neutral
iv. Somewhat confident
v. Confident

1, DRIFT, GENETIC

QUESTIONS 16–23: Using a scale of unconfident to confident, please rank how confident you would be in the following scenarios:

16. How confident are you that you could explain the meaning of the term “biodiversity” to another person?

i. Unconfident
ii. Somewhat unconfident
iii. Neutral
iv. Somewhat confident
v. Confident

17. How confident are you that you could write a short essay, without using notes, on the different components of biodiversity?

i. Unconfident
ii. Somewhat unconfident
iii. Neutral
iv. Somewhat unconfident
v. Confident

18. How confident would you be in giving a short presentation on biodiversity in class?

    i. Unconfident
    ii. Somewhat unconfident
    iii. Neutral
    iv. Somewhat confident
    v. Confident

19. How confident would you be discussing the effects of immigration on genetic diversity in populations to another person?

    i. Unconfident
    ii. Somewhat unconfident
    iii. Neutral
    iv. Somewhat confident
    v. Confident

20. How confident would you be discussing the effects of immigration on species diversity in populations to another person?

    i. Unconfident
    ii. Somewhat unconfident
    iii. Neutral
    iv. Somewhat confident
    v. Confident

21. How confident would you be explaining the general effects of population size on genetic diversity to another person?

    i. Unconfident
    ii. Somewhat unconfident
    iii. Neutral
    iv. Somewhat confident
    v. Confident

22. How confident would you be explaining the general effects of island size/habitat patch size on species diversity to another person?

    i. Unconfident
    ii. Somewhat unconfident
    iii. Neutral
    iv. Somewhat confident
    v. Confident

23. How confident are you that you could explain three or more reasons why biodiversity is important to another person?

    i. Unconfident
    ii. Somewhat unconfident
    iii. Neutral
    iv. Somewhat confident
    v. Confident

Age:

Gender:

Major:

Year of expected graduation and expected degree (PhD, MS, MFR, BS)

Come from rural or urban county (if you're not sure, write down the name of the county and the state):