

Brett Robbins Academic Consulting

Biology 20 Practice Test

Unit 2: Ecosystems and Population Change

10 Questions

Original practice questions written to the Alberta curriculum, in the style of past diploma examinations. Work through each question, then check your answers with the key at the end.

This practice test was made by AI and there may be mistakes. If a question or answer looks wrong, contact Brett for clarification.

Question 1

Which of the following is an abiotic component of a grassland ecosystem?

- A) Sunlight reaching the soil
- B) Grasses growing in the soil
- C) Bacteria that decompose dead matter
- D) Insects that feed on leaves

Question 2

All of the moose living in one area of a provincial park at the same time make up a

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|--------------|---------------|
| A) Community | B) Population |
| C) Ecosystem | D) Habitat |

Question 3

Biologists counted 360 white-tailed deer in a study area of 45 km².

The population density of the deer, in individuals per km², is ____.

Question 4

The ecological niche of a species is best described as

- A) the place where the species lives
- B) the number of individuals of the species in an area
- C) the role of the species in its ecosystem, including the resources it uses and its interactions with other species
- D) the position of the species in a food chain

Question 5

Primary succession would most likely begin on

- A) an abandoned farm field
- B) a forest floor left after a wildfire
- C) an area where shrubs were cleared to build a road
- D) bare rock exposed when a glacier retreats

Question 6

In one year, a caribou population had 240 births, 60 immigrants, 150 deaths, and 90 emigrants.

The change in population size, ΔN , for the year was

- A) 60
- B) 240
- C) 300
- D) 480

Question 7

A population of 2500 rabbits increased by 300 individuals over one year.

The per capita growth rate of the population for that year was ____.

Question 8

Which of the following is a density! – ! independent limiting factor for a deer population?

- A) Competition for food among the deer
- B) Predation by wolves
- C) The spread of a contagious disease
- D) A severe drought that reduces the water supply

Question 9

A bee collects nectar from a flower and, in the process, transfers pollen that allows the flower to reproduce.

The relationship between the bee and the flower is an example of

- | | |
|---------------|-----------------|
| A) Parasitism | B) Commensalism |
| C) Mutualism | D) Predation |

Question 10

A bacterial culture starts with 500 cells. The population doubles every hour under ideal conditions.

The number of cells present after 4 hours is ____.

Answer Key

- | | | |
|------|---------|----------|
| 1. A | 5. D | 9. C |
| 2. B | 6. A | 10. 8000 |
| 3. 8 | 7. 0.12 | |
| 4. C | 8. D | |

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