Quiz 5 - Evolution: Natural Selection

Due Feb 19 at 11:59pm **Points** 7 **Questions** 7
Available until Feb 20 at 2am **Time Limit** 60 Minutes
Allowed Attempts 2

Instructions

This quiz asks questions about natural selection. Targeted reading pages for the Evolution Unit Part I: **Targeted Readings - Evolutionary Mechanisms - Part I.pdf (https://canvas.ubc.ca/courses/105572/files/24667415?wrap=1)** **(https://canvas.ubc.ca/courses/105572/files/24667415/download?download_frd=1)**

You have 2 attempts at this quiz. The highest mark counts.

This quiz will remain open until 11:59 pm on Sunday, February 19th.

Take the Quiz Again

Attempt History

	Attempt	Time	Score
LATEST	Attempt 1	9 minutes	7 out of 7

ⓘ Correct answers will be available on Feb 20 at 12pm.

Score for this attempt: **7** out of 7
Submitted Feb 18 at 9:46am
This attempt took 9 minutes.

Question 1	**1 / 1 pts**

If climate projections are accurate, southern British Columbia will experience warmer, drier summers than in previous years. This has consequences for plant survival. Research suggests that plants carrying the allele ABCP-2 can tolerate drought conditions for longer than plants carrying the allele ABCP-1. If summers in B.C. do get warmer and drier, what would you expect to happen to the frequency of plants carrying the ABCP-2 allele relative to the plants carrying the ABCP-1 allele?

- ○ The frequency of plants carrying the ABP-2 allele and the ABCP-1 alllele will remain unchanged.
- ○ The frequency of plants containing the ABCP-1 allele will increase relative to the frequency of plants that are carry the ABCP-2 allele
- ◉ The frequency of plants containing the ABCP-2 allele will increase relative to the frequency of plants carrying the ABCP-1 allele

Question 2

1 / 1 pts

Individuals are selected in the process of Natural Selection, but it is the population, not individuals, that evolves.

- ◉ True
- ○ False

Question 3

1 / 1 pts

According to the theory of evolution by natural selection, which of the following is FALSE?

- Individuals with certain heritable traits contribute more reproductively to the next generation than others without those traits.
- The individuals that survive to reproduce are a random sample of the population.

Question 4

1 / 1 pts

The best definition of Darwinian fitness is _____.

- the ability of a population to survive
- the ability of a population of organisms to persist
- the ability of an individual to stay healthy by eating well-balanced meals and exercising
- the ability of an individual to survive and reproduce

Question 5

1 / 1 pts

Which of the following has the highest Darwinian fitness?

- A scientist who devotes herself to science and wins the Nobel Prize

- (●) A sperm donor who anonymously fathers 52 children
- ( ) A woman who home schools her two children
- ( ) A personal trainer who works out at the gym every day

Question 6

1 / 1 pts

Arctic toothfishes live in very cold water year-round. These fishes express unique genes that code for anti-freeze proteins. The production of anti-freeze proteins in these fish is an example of _____.

- ( ) acclimation
- (●) an adaptation
- ( ) an acquired characteristic
- ( ) genetic correlation

Question 7

1 / 1 pts

For a scientist to make a claim that a change in phenotypic frequencies (e.g. beak size) within a population is caused by natural selection, there must be evidence that (select all answers that apply):

- [x] The trait is heritable
- [x] There is variation in this trait with a population
- [x] Variation in the trait is linked to differences in fitness

- [ ] An individual's fitness is independent of the environment.o t

Quiz Score: **7** out of 7