BIOLOGY · ARIZONA

Biology
Practice Test

Unit 3: Evolution and Diversity

25 Questions

Original practice test based on the Arizona curriculum. Work through each question, then check your answers at the end.

This practice test was made by AI and there may be mistakes. If a question or answer looks wrong, use the Flag a mistake button to let Brett know so he can fix it.

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Question 1

Natural selection acts on variation within a population, and individuals with traits better suited to the environment are more likely to

A) Survive and reproduce

B) Mutate on demand

C) Change their genes

D) Live forever

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Question 2

Fitness in evolutionary biology refers to an organism's ability to survive and pass its genes to

A) Predators

B) Competitors only

C) The next species

D) Offspring

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Question 3

Overproduction means that most species produce more offspring than can survive, which leads to

A) No variation

B) Instant speciation

C) Competition for resources

D) Unlimited food

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Question 4

An adaptation is an inherited trait that helps an organism survive and reproduce in its

A) Fossil record

B) Environment

C) Lifetime only

D) Parent generation

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Question 5

Darwin observed that finches on different Galapagos islands had different beak shapes suited to different

A) Food sources

B) Nesting materials

C) Migration routes

D) Mating songs only

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Question 6

Lamarck proposed that traits acquired during an organism's lifetime could be inherited, an idea that is not supported because acquired traits do not change

A) Body size

B) Behavior

C) Habitat

D) DNA passed to offspring

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Question 7

Fossils in older rock layers are generally simpler than fossils in younger layers, which supports the idea that life has

A) Appeared all at once

B) Moved to other planets

C) Changed over time

D) Stayed exactly the same

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Question 8

Homologous structures, such as the forelimbs of whales, bats, and humans, suggest the organisms share a

A) Common predator

B) Common ancestor

C) Common diet

D) Common habitat only

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Question 9

Analogous structures, such as the wings of birds and insects, have similar functions but evolved separately, which is evidence of

A) Convergent evolution

B) Common ancestry

C) Artificial selection

D) Fossil formation

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Question 10

A vestigial structure, such as the hind leg bones inside a whale, is a structure that has lost most or all of its original

A) Size only

B) Color

C) Location

D) Function

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Question 11

Similar patterns in the early embryos of vertebrates suggest that vertebrates share a common

A) Habitat

B) Diet

C) Ancestor

D) Predator

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Question 12

DNA and protein similarities between two species are strong evidence of how closely the species are

A) Feeding

B) Related

C) Competing

D) Migrating

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Question 13

Geographic isolation can lead to speciation when two populations are separated by a barrier and no longer

A) Interbreed

B) Compete

C) Migrate

D) Mutate

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Question 14

Reproductive isolation occurs when two populations can no longer produce fertile offspring together, even if they live in the

A) Same fossil layer

B) Same genus only

C) Same ocean

D) Same area

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Question 15

When bacteria are exposed to an antibiotic, resistant bacteria survive and reproduce, so over time, the population becomes mostly

A) Unable to reproduce

B) Dependent on sunlight

C) Resistant to the antibiotic

D) Sensitive to the antibiotic

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Question 16

Artificial selection differs from natural selection because humans choose which organisms

A) Fossilize

B) Reproduce

C) Mutate

D) Migrate

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Question 17

Adaptive radiation occurs when one ancestral species gives rise to many species adapted to different

A) Environments

B) Predators only

C) Seasons only

D) Fossil layers

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Question 18

Coevolution occurs when two species evolve in response to each other, such as a flowering plant and its

A) Fossil

B) Predator only

C) Competitor only

D) Pollinator

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Question 19

A cladogram shows evolutionary relationships, and species that share a more recent branching point share a more recent

A) Habitat

B) Diet

C) Common ancestor

D) Fossil

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Question 20

In binomial nomenclature each species is given a two part scientific name consisting of its genus and its

A) Common name

B) Species name

C) Family name

D) Kingdom name

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Question 21

The three domains of life are Bacteria, Archaea, and

A) Eukarya

B) Animalia

C) Plantae

D) Fungi

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Question 22

A population in which an allele makes up 40 out of 200 total alleles has an allele frequency of

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Question 23

A mass extinction removes many species at once and can open new environments for the

A) Fossil record

B) Oldest species

C) Surviving species

D) Extinct species

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Question 24

Biodiversity is important for ecosystems because a variety of species makes an ecosystem more likely to recover from

A) Migration

B) Disturbance

C) Speciation

D) Fossilization

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Question 25

The fossil record is incomplete because not every organism becomes a fossil and many fossils are

A) Destroyed or undiscovered

B) Found in living animals

C) Made of DNA only

D) Buried in ice only

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ANSWER KEY

1.	A	**10.**	D	**18.**	D
2.	D	**11.**	C	**19.**	C
3.	C	**12.**	B	**20.**	C
4.	C	**13.**	A	**21.**	A
5.	A	**14.**	D	**22.**	0.2
6.	D	**15.**	C	**23.**	C
7.	C	**16.**	B	**24.**	B
8.	B	**17.**	A	**25.**	A
9.	A				

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