

IGCSE Biology

Name: _____ Score: _____

1. Which is an example of genetic variation?
 - ☐ a suntan
 - ☐ a scar
 - ☐ blood group
 - ☐ a learned language
2. An adaptive feature is one that helps an organism:
 - ☐ live forever
 - ☐ survive and reproduce in its environment
 - ☐ change its DNA at will
 - ☐ grow taller than others
3. Antibiotic resistance evolves because:
 - ☐ antibiotics make bacteria stronger
 - ☐ resistant bacteria survive and multiply while others die
 - ☐ bacteria stop reproducing
 - ☐ bacteria decide to resist
4. Selective breeding means choosing:
 - ☐ never to breed
 - ☐ the weakest individuals
 - ☐ random parents
 - ☐ parents with desired features to breed together
5. Which shows continuous variation?
 - ☐ blood group
 - ☐ eye colour categories
 - ☐ tongue rolling
 - ☐ height
6. Adaptations can be structural, behavioural or functional.
 - ☐ True ☐ False

7. Organisms develop helpful variations because they need them to survive.

☐ True ☐ False

8. Which are uses of selective breeding? (Select all that apply.)

- ☐ cows that produce more milk
- ☐ disease-resistant plants
- ☐ wild animals untouched by humans
- ☐ crops with higher yield

Tick every correct option.

9. Which create genetic variation? (Select all that apply.)

- ☐ eating well
- ☐ fertilisation
- ☐ meiosis
- ☐ mutations

Tick every correct option.

10. An inherited feature that improves survival in a habitat is an _____ feature.

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1. blood group

Blood group is determined by genes; the others are environmental.

2. survive and reproduce in its environment

Adaptations improve survival and reproduction.

3. resistant bacteria survive and multiply while others die

Selection favours the already-resistant bacteria.

4. parents with desired features to breed together

Humans pick the parents with the wanted trait.

5. height

Height varies over a continuous range.

6. True

All three types help survival.

7. False

False. Variation arises randomly, mainly through mutation; organisms do not choose to adapt. Natural selection then favours the helpful variations.

8. cows that produce more milk; disease-resistant plants; crops with higher yield

The first three are selective breeding; the last is not.

9. fertilisation; meiosis; mutations

Meiosis, fertilisation and mutations create variation; diet is environmental.

10. adaptive

Adaptive features are shaped by natural selection.