

## Diff Biology Genetics Exam

### Multiple Choice

Identify the choice that best completes the statement or answers the question.

- Gregor Mendel used pea plants to study
  - flowering.
  - gamete formation.
  - the inheritance of traits.
  - cross-pollination.
- Offspring that result from crosses between parents with different traits
  - are true-breeding.
  - make up the  $F_2$  generation.
  - make up the parental generation.
  - are called hybrids.
- The chemical factors that determine traits are called
  - alleles.
  - traits.
  - genes.
  - characters.
- Gregor Mendel concluded that traits are
  - not inherited by offspring.
  - inherited through the passing of factors from parents to offspring.
  - determined by dominant factors only.
  - determined by recessive factors only.
- When Gregor Mendel crossed a tall plant with a short plant, the  $F_1$  plants inherited
  - an allele for tallness from each parent.
  - an allele for tallness from the tall parent and an allele for shortness from the short parent.
  - an allele for shortness from each parent.
  - an allele from only the tall parent.
- The principle of dominance states that
  - all alleles are dominant.
  - all alleles are recessive.
  - some alleles are dominant and others are recessive.
  - alleles are neither dominant nor recessive.
- A tall plant is crossed with a short plant. If the tall  $F_1$  pea plants are allowed to self-pollinate,
  - the offspring will be of medium height.
  - all of the offspring will be tall.
  - all of the offspring will be short.
  - some of the offspring will be tall, and some will be short.