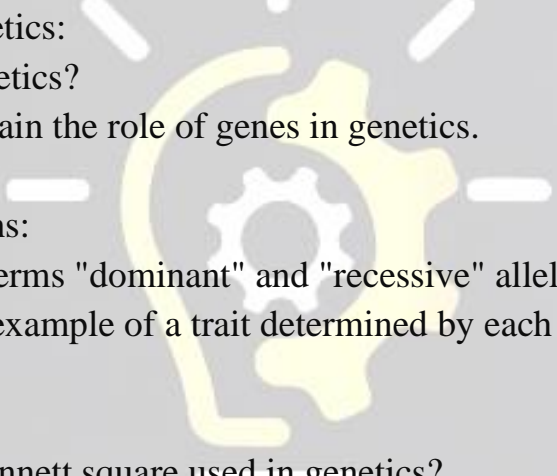


# ***AIS Learning***

## **A/L Biology**

### **Practice Tutorial**

#### **Lesson 01: Introduction To Genetics**

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1. Definition of Genetics:
    - a. What is genetics?
    - b. Briefly explain the role of genes in genetics.
  2. Inheritance Patterns:
    - a. Define the terms "dominant" and "recessive" alleles.
    - b. Provide an example of a trait determined by each of these alleles.
  3. Punnett Squares:
    - a. How is a Punnett square used in genetics?
    - b. Use a Punnett square to predict the outcomes of a cross between individuals with heterozygous traits ( $Aa \times Aa$ ).
  4. Genotype and Phenotype:
    - a. Define genotype and phenotype.
    - b. Give an example of how the genotype can influence the phenotype.
  5. Mendel's Laws:
    - a. State Mendel's Law of Segregation.
    - b. State Mendel's Law of Independent Assortment.
  6. Chromosomes:
    - a. How many chromosomes are typically found in human somatic cells?
    - b. What is the role of chromosomes in inheritance?

7. DNA Structure:

- a. Describe the structure of DNA.
- b. What are the four nitrogenous bases in DNA?

8. Genetic Mutations:

- a. What is a genetic mutation?
- b. Provide an example of a genetic disorder caused by a mutation.

9. Sex Determination:

- a. Explain how sex is determined in humans.
- b. What are sex-linked traits?

10. Genetic Engineering:

- a. Define genetic engineering.
- b. Name one application of genetic engineering in agriculture or medicine.

*Try those questions by yourself and submit your answers to us.*

*We can evaluate it for you!!!!*

***Happy Learning!!!!***

*-Evaluation Team AIS Learning*