

Questions on Genetics

1. Which of the following is not a part of Mendel's laws of inheritance?

- a) Law of dominance
- b) Law of segregation
- c) Law of independent assortment
- d) Law of linkage

2. In humans, sex is determined by:

- a) Length of chromosomes
- b) Environmental factors
- c) XX – XY chromosome combination
- d) Number of autosomes

3. A tall plant (TT) is crossed with a dwarf plant (tt). What will be the genotype of the F1 generation?

- a) TT
- b) Tt
- c) tt
- d) TTTT

4. Traits which are inherited separately and do not influence each other follow the law of:

- a) Dominance
- b) Segregation
- c) Independent Assortment
- d) Variation

5. What percentage of offspring will be tall if a heterozygous tall plant is crossed with a dwarf plant?

- a) 0%
- b) 25%
- c) 50%
- d) 100%

6. A cross between two individuals results in a 9:3:3:1 ratio of traits. This is an example of:

- a) Monohybrid cross
- b) Dihybrid cross
- c) Test cross
- d) Back cross

7. Which of the following determines the sex of a child in humans?

- a) Egg
- b) X chromosome of mother
- c) Y chromosome of father
- d) Autosomes of father

8. Which of the following is not inherited from parents to offspring?

- a) Eye colour
- b) Blood group
- c) Height
- d) Body weight

9. Who is known as the father of genetics?

- a) Charles Darwin
- b) Gregor Mendel
- c) Watson
- d) Lamarck

10. In a monohybrid cross, the F₂ generation shows a phenotypic ratio of:

- a) 1:1
- b) 2:1
- c) 3:1
- d) 9:3:3:1