



BIOLOGY

NCERT - NCERT BIOLOGY(ENGLISH)

PRINCIPLES OF INHERITANCE AND VARIATION

Principles Of Inheritance And Variation

1. Mention the advantages of selecting pea plant for experiment by Mendel.



[Watch Video Solution](#)

2. Differentiate between the following:

(a) Dominance and Recessive

(b) Homozygous and Heterozygous

(c) Monohybrid and Dihybrid.



[Watch Video Solution](#)

3. A diploid organism is heterozygous for 4 loci, how many types of gametes can be

produced?



Watch Video Solution

4. Explain the Law of Dominance using a monohybrid cross.



Watch Video Solution

5. Define and design a test – cross?



Watch Video Solution

6. Using a Punnett square, work out the distribution of phenotypic features in the first filial generation after a cross between a homozygous female and a heterozygous male for a single locus.



Watch Video Solution

7. When a cross is made between tall plants with yellow seeds ($TtYy$) and tall plant with green seed ($TtYy$), what proportions of

phenotype in the offspring could be expected to be

- (a) Tall and green.
- (b) Dwarf and green.



Watch Video Solution

8. Two heterozygous parents are crossed. If the two loci are linked what would be the distribution of phenotypic features in F_1 generation for a dihybrid cross?



View Text Solution

9. Briefly mention the contribution of T.H. Morgan in genetics.



Watch Video Solution

10. What is pedigree analysis? Suggest how such an analysis, can be useful.



Watch Video Solution

11. How is sex determined in human beings?



Watch Video Solution

12. A child has blood group O. If the father has blood group A and mother blood group B, work out the genotypes of the parents and the possible genotypes of the other offsprings.



Watch Video Solution

13. Explain the following terms with example

(a) Co-dominance

(b) Incomplete dominance



Watch Video Solution

14. What is point mutation? Give one example.



Watch Video Solution

15. Who had proposed the chromosomal theory of inheritance?



Watch Video Solution

16. Mention any two autosomal genetic disorders with their symptoms



Watch Video Solution