



BIOLOGY

NCERT - NCERT BIOLOGY(TELUGU)

PRINCIPLES OF INHERITANCE AND VARIATION

Exercises

1. What are Mendel's laws of inheritance?

What are the reasons to choose pea plant for

his experiment?



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2. Differentiate between the following -

(a) Dominance and Recessive (b) Homozygous
and Heterozygous

(c) Monohybrid and Dihybrid.



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



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4. What are the differences between monohybrid cross and dihybrid cross?



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5. Define and design a test - cross?



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6. Using a Punnett Square, workout 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.



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7. When a cross is made between tall plant 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.



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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?



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



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



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11. How is sex determined in human beings?



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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.



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13. Explain the following terms with examples:

(a) Co-dominance (b) Incomplete dominance.



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14. What is point mutation? Give one example.



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15. Who had proposed the chromosomal theory of the inheritance?



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16. Mention any two autosomal genetic disorders with their symptoms



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