

**ONE TWO ACADEMY****STD 10 SCIENCE****Genetics****Total:- 25 marks****Time:- 45 minutes****Answer the following questions:****4 x 1 = 4**

1. Name the bond which binds the nucleotides in a DNA.
2. Name the condition when both alleles are identical.
3. What is sickle cell anaemia?
4. Define Heredity.

**Answer any three of the following questions:-****3 x 2 = 6**

5. What do you understand by the term phenotype and genotype.
6. What are allosomes.
7. What are Okazaki fragments.
8. Under which conditions does the law of independent assortment hold good and why ?

**Answer any two of the following questions:-****2 x 4 = 8**

9. Explain in detail the types of Chromosomes based on the position of the centromere.
10. State Mendel's law of heredity.
11. Explain Mendel's dihybrid cross.

**Answer any one of the following questions:-****1 x 7 = 7**

12. How is the structure of DNA organised? What is the biological significance of DNA? State Chargaff and DNA base pairing.
13. Explain sex determination in Humans.