

**CHAPTER 3 – CHROMOSOMAL BASIS OF INHERITANCE**

**2/3 MARK QUESTIONS:**

1. What are chromosomes?
2. **Define Linkage, Coupling and repulsion.**
3. What is Synteny?
4. What is complete and incomplete linkage?
5. What are the differences between Linkage and Cross over?
6. **What is crossing over?**
7. What is recombination?
8. What is three point test cross?
9. **What are multiple alleles?**
10. **Define mutation.**
11. **What are co-mutagens?**
12. **What is translocation or illegitimate cross over?**

**5 MARK QUESTIONS:**

1. **Salient features of chromosomal theory of inheritance by Sutton and Boveri.**
2. Behaviour of chromosome during meiosis.
3. **Explain coupling (cis configuration) in linkage.**
4. Explain repulsion (trans configuration) in linkage.
5. **Explain crossing over. Mention the importance.**
6. Write the steps involved in molecular mechanism of DNA recombination with diagram.
7. **What is gene mapping or genetic mapping? Write its uses.**
8. How does nicotiana exhibit self compatibility? Explain its mechanism.
9. Sex determination in maize.
10. **Write a short note on mutagens.**
11. **Give an account of Gene Mutation.**
12. **Give an account of Anueploids.**
13. Give an account of Euploidy.
14. **Mention the significances of ploidy.**
15. Give an account of structural chromosomal mutation (aberration).