CHAPTER-1

ELECTROSTATICS

1. Define electric charge. Explain the properties of electric charges.
2. What is Coulomb's law? State the mathematical expression and explain its significance in the context of electric charges.
3. Describe the concept of an electric field. How is the electric field intensity calculated due to a point charge?
4. Explain the concept of an electric dipole. What is an electric dipole moment, and how is it related to the strength of an electric dipole?
5. Discuss the behavior of conductors and insulators concerning the flow of electric charges. Explain the phenomenon of induced charges on conductors.
6. How does the concept of conservation of charge apply in the context of an isolated system?
7. Describe the distribution of charges on conductors. What factors influence the distribution of charges on a conductor's surface?
8. Discuss the properties and characteristics of electric field lines. How do electric field lines represent the electric field around a charge?
9. Explain the interaction between multiple charges in an electric field. How do the forces between charges vary based on their magnitudes and distances?
10. Discuss the application of the principles of electric charges and fields in practical scenarios. Provide examples of how these principles are employed in everyday technology or scientific research.