CHAPTER-2
ELECTROSTATIC POTENTIAL AND CAPACITANCE

1. Define electrostatic potential. Explain how it is related to the work done in bringing a unit positive test charge from infinity to a point in an electric field.
2. Describe the concept of equipotential surfaces. How are they related to the electric field and the potential at different points?
3. Explain the concept of the potential energy of a system of charges. How is the potential energy of a system of charges related to the work done in assembling the charges from infinity to their positions?
4. What is capacitance? Explain how it is related to the ability of a conductor to store charge.
5. Discuss the factors influencing the capacitance of a capacitor. How does the area of the plates and the distance between them affect the capacitance?
6. Explain the concept of energy stored in a capacitor. How is the energy stored in a capacitor related to the work done in charging it?
7. Discuss the behavior of a parallel plate capacitor in the presence of a dielectric material. How does the presence of a dielectric affect the capacitance and energy stored in the capacitor?
8. Explain the concept of electric potential due to a point charge and a system of charges. How is the electric potential related to the configuration and distribution of charges?
9. Discuss the significance of electric potential in understanding the behavior of electric fields and the interaction between charged particles.
10. Describe the practical applications of electrostatic potential and capacitance in various technological devices or systems. Provide examples of how these concepts are applied in real-world scenarios.