

Check List - I

- ① Coulomb's Law - Vector Form - Permittivity.
2. Electric Field Intensity and Potential of Electrostatic field.
3. E & V due to Point Charge.
4. E & V due to Group of Point charge.
 - (A) Along joining line of two equal point charge.
 - (B) Along equilateral bisector of joining line of two equal positive charge.
5. E & V at any axial point of Uniform Circular Linear Positive Charge.
6. E & V at any Point due to Uniform Spherical areal charge distribution
 - (a) outside (b) on the ~~charge~~ surface (c) Inside
7. E & V at any Point due to Uniform Spherical Volume charge distribution.
 - (a) Inside (b) Outside (c) On the Surface.
8. Electrostatic Interaction Energy
 - (a) Particle System (b) Continuous Charge System.
9. E & V at any axial point of Uniform, ^{circular} areal Positive Charge distribution (Disc).
 - (a) E & V due to (a) Annular area Circular charge distribution (b) hollow Spherical Volume charge distribution

Checklist - II

11. Electric Dipolarity . Effect of Electric Field on the dipoles . Expression for Torque, experienced by dipole.
12. Potential energy of the dipole inside uniform Electric Field and its variation.
13. Electric Field intensity and Potential, at any axial point of Dipole.
14. Electric field intensity and Potential, at any point on the equilateral bisector.
15. Electric Field and Potential at any point due to electric dipole.
16. Effect of Non-Uniform Electric Field on the Dipole.
17. Dipole - Dipole Interaction.
- ~~18.~~

Checklist-III

18.

Electric Flux - Definition - Unit - Dimension.

19. Area Vector - Rules for its Direction

20. Determination of Electric Flux of Uniform & Non Uniform Field by different closed Surface.

21. Gauss Theorem. Statement & ~~Proof~~ Derivation

22. Application of Gauss Theorem:
Determination of Electric Field E

a) ~~Electric~~ Due to Point charge.

b) Due to Linear charge Distribution.

c) Due to Areal charge distribution

d) " " Volume charge distribution.

23. Capacity - Definition - Unit - Dimension.

24. Parallel Plate Capacitor - Description function. Expression of Capacity

25. Parallel Plate Capacitor. completely or Partially filled with dielectric Material.

26) Spherical Condenser - with & without Dielectric

27. Cylindrical Condenser - " " "

28. Series & Parallel Combination of Capacitor.