Physics - ICS Part 2 Physics Chapter 12 Short Questions Preparation

Q1. Describe the force on positive charge when placed between parallel plates with opposite and equal charges.

Ans 1: When a positive point charge is placed between parallel plates with opposite but equal amount of charge ,then electric field intensity due to one plate is equal in magnitude but in same direction of the electric field intensity due to the other plate.So the value of resultant electric field intensity is non-zero.Hence the point charge will be accelerated towards negative plate.

Q2. Define xerography and photoconductor.

Ans 1: Xerograph is a photocopying process,It is taken from the Greek word "xeros" and "graphos" when mean dry writing.
Photoconductor is an insulator in the dark and becomes a conductor when exposed to light.

Q3. Suggest a method 'shield' an apparatus from electric field even when it is to be kept in the region where electric field is present.

Ans 1: An apparatus will be shielded from electric field when it is kept inside the metallic box,so that the charge will only reside on the outer surface of the container.It is in accordance with Gauss law.

Q4. Write down two difference between electric and gravitational force.

Ans 1: Differences:Electrical force is might be attractive as well as repulsive while the gravitational force is only attractive.Electrostatics force is medium dependent while the gravitational force is not.

Q5. What is capacitor?Define the capacitance.

Ans 1: Capacitor is a device used to store charge,
Capacitance is a measure of ability of capacitor to store charge.

Q6. Define electric polarization and electric dipole.

Ans 1: When dielectric is placed between the plants of capacitor,positive and negative charge of its molecules displace from their position.Positive charges are attracted towards negative plates and negative charges towards positive plate,dipoles are formed.This process is called polarization.
Two equal and opposite charges separated by a small distance is called dipole.

Q7. Distinguished between electric field and field intensity.

Ans 1: Electric Field: The space or region around the charge in which it exerts its electric force on other charges is called electric field.

Ans 2: Electric field intensity: At any point in electric field the force experienced by a point charge q is termed as electric or strength at that point.

Q8. Write two properties of electric field.

Ans 1: 1.Electric field line originate from positive charge and end om negative charges.
2.The tangent to a field line at any point gives the direction of the electric field intensity at the point.

Q9. Define electric potential and give its SI units.

Ans 1: The electric potential at any point in an electric field is equal to work done in bringing a unit positive charge from infinity to that point keeping it in equilibrium.Its SI unit is Volt (V).

Q10. Why do the electrons tend to go to region of high potential?

Ans 1: We know that the electrons are negatively charged particles.So,when they are put inside an electric field they tend to go the region of high potential from the region of low potential.
