Physics - 12th Class Physics Chapter 1 Short Questions Preparation

Q1. What depend on the slow or fast charging and discharging of a capacitor?

Ans 1: How fast or how slow the capacitor is charging or discharging depends upon the products of the resistance and the capacitance called time constant.Capacitor is charged or discharged rapidly when RC is small.

Q2. Define electrostatics and electric force,

Ans 1: Electrostatics: The branch of physics which deals with the study of stationary charges is called electrostatics.Electric force: The force which holds the negative and positive charges that make up atoms or molecule is called electric force.

Q3. If a point charge q of mass is released in a non-uniform electric field with field lines pointing in the same directions,will it make rectilinear motion?

Ans 1: If a point charge q of mass m is placed at any point in the field ,it will follow straight or rectilinear path along the field line due to repulsive force.

Q4. A point charge move rectilinear path in an electric field.Explain.

Ans 1: If a point charge q of mass m is placed at any point in the field in the point,it will follow straight or rectilinear path along the field line due to repulsive force.

Q5. Is it true that Gauss's law states that the total number of lines of forces crossing any closed surface in the outwards direction is proportional to the net positive charged enclosed within surface?

Ans 1: Yes the above statement is true,The total number of lines of force crossing any close surface in the outwards directions means electric flux.

Q6. Electric lines of force never cross why?

Ans 1: Electric lines of force never cross each other,This is because that electric field line has only one direction at any given point.If the lines cross ,electric field lines could have more than one direction which is not possible.

Q7. What is strength of electric field inside a hollow charged sphere and why?

Ans 1: The strength of electric field inside a hollow charge is zero.inside a hollow charge sphere q=0.

Q8. What is meant by EEG and ERG?

Ans 1: Electroencephalography: is usually applied over human brain to check its abnormal behaviour by the use of electrical energy.For this electrodes are connected to the selected portion of the head and the corresponding response is seen graphically through the screen of a recording device.

Ans 2: Electrocardiography: records the voltage between points on human skin generated by the electrical process in the heart,It is made in running position providing information about hearts performance under stress.

Q9. 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.

Q10. Define electric flux.Write its SI units.

Ans 1: The number of the field lines passing through a certain element of area is known as electric flux through that area.Its SI units is Nm^2C^{-1}.
