Physics - 12th Class Physics Chapter 1 Short Questions Preparation

Q1. Define Time constant for RC Circuit.

Ans 1: The time required by the capacitor to deposit 0.63 times the equilibrium charge q is called time constant.The product of R and C has the dimensions of time.So this product is known as time constant.
t=RC

Q2. 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.

Q3. 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.

Q4. Describe the force or forces on a positive point charge when placed between parallel plate,with similar and equal charges.

Ans 1: When a positive point charge is placed between parallel plates with similar and equal charges,then the electric field intensity due to one plate is equal in magnitude but opposite in direction of electric intensity due to other plate.So the value of resultant electric field intensity E is zero,Hence the net force on the positive charge is zero,Thus is will remain at rest.

Q5. 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.

Q6. How sharks looks their prey?

Ans 1: Sharks have special organs,called the ampullae of Lorenzini that are very sensitive to electric field and can detect potential difference of the order of nano volt and can locate their prey very precisely.

Q7. Give the statement of Gauss's law.

Ans 1: It states that the total electric flux through any closed surface is equal to $1/e_o$ times the total charged encloses in it.

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. Is E is necessary zero inside a charged rubber balloon if balloon is spherical?

Ans 1: Yes, E is necessarily zero inside a charged rubber balloon if balloon is spherical.

Q10. Do electrons tend to go region of high potential or low potential?

Ans 1: Electrons tend to go to a region of high potential from low potential because electrons are negatively charged.
