



SMART TEST SERIES

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Name:		Subject:	Physics-12
Roll # :		Unit(s):	12,
Class:	Inter Part-II	Test:	Type 3 - MCQs + SQs Test - Marks=30
Date:		Time:	

Q.1 Four possible answers A, B, C & D to each question are given. Circle the correct one. (10x1=10)

- Presence of dielectric always:
(A) Increase the electrostatic force. (B) Decrease the electrostatic force. (C) Does not effect.
(D) Double the electrostatic force.
- The value of charge on 1.0×10^7 electrons is:
(A) 1.6×10^{-12} C (B) $1.6 \times 10^{+11}$ C (C) 1.6×10^{-19} C (D) $1.6 \times 10^{+19}$ C
- Identify the practical application of electrostatic force.
(A) Inkjet printer (B) X-rays (C) Laser (D) A.C generator
- Electric flux is expressed as:
(A) $\phi_e = E \times A$ (B) $\phi_e = E \cdot Q$ (C) $\phi_e = E \cdot A$ (D) $\phi_e = EA^2$
- Gauss's Law can only be applied to:
(A) A curved surface (B) A flat surface (C) A surface of any shape (D) A closed surface
- An ECG records the between points on human skin generated by electric process in the heart:
(A) Heart beat (B) Pulse rate (C) Pressure (D) Voltage
- Special organ called ampullae of Lorenzini that are very sensitive to electric field are found in:
(A) Bats (B) Cats (C) Dogs (D) Sharks
- If electric and magnetic forces on an electron balance each other, the electric intensity be:
(A) $E = \frac{mg}{q}$ (B) $E = \frac{q}{mg}$ (C) $E = \frac{F_e}{q}$ (D) $E = \frac{1}{4\pi\epsilon_0} \frac{q}{r^2}$
- Capacitance of a capacitor does not depend upon:
(A) Distance between plates (B) Area of plates (C) Electric field between plates
(D) Medium between plates
- Energy stored in the capacitor with dielectric is:
(A) $\frac{1}{2}\epsilon_r\epsilon_0 E^2 Ad$ (B) $\epsilon_0 AE^2$ (C) $\frac{\epsilon_0 A}{d}$ (D) $\frac{1}{2}\epsilon_r\epsilon_0 E^2$

Q.2 Write short answers of the following questions.

(10x2=20)

- Define Coulomb's Law write its mathematical formula?
- Electric lines of forces never cross one another why?
- Distinguish between electric field and field intensity.
- Write the names of main parts of xerography and draw its diagram.
- What are factors upon which electric flux depend?
- What is difference between electric potential energy and electric potential difference?
- Define potential gradient. Give its unit.
- Define unit of Capacitance give its units.
- Define dielectric constant give its mathematical form.
- Describe the force or forces on a positive point charge when placed between parallel plates with similar and equal charges.