



SMART TEST SERIES

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Name:		Subject:	Physics-12
Roll # :		Unit(s):	14,
Class:	Inter Part-II	Test:	Type 8 - Short Test (No Choice) - Marks=30
Date:		Time:	

Q.1 Circle the Correct Answers.

(6x1=6)

- A dot represents the direction of magnetic field:
(A) Out of page (B) Into the page (C) Tangent to page (D) Parallel to page
- 1 Tesla = ____.
(A) $N^{-1}Am$ (B) $1NA m^2$ (C) $1NA^{-1}m^2$ (D) $1NA^{-1}m^{-1}$
- Lorentz force is given by:
(A) $q \left(\vec{E} - \vec{v} \times \vec{B} \right)$ (B) $q \left(\vec{E} + \vec{v} \times \vec{B} \right)$ (C) $q[\vec{E} \times (\vec{v} + \vec{B})]$
(D) $q \left(\vec{v} + \vec{E} \times \vec{B} \right)$
- Formula of e/m of an electron is:
(A) $\frac{2v}{Br}$ (B) $\frac{2v}{B^2r^2}$ (C) $\frac{v}{B^2r^2}$ (D) $\frac{v}{Br}$
- In order to increase sensitivity of galvanometer the value of C may be:
(A) Increase (B) decrease (C) Neither increase nor decrease (D) Remain same.
- The effective way to increase the sensitivity of moving coil galvanometer is:
(A) Increase the area of coil. (B) Increase the number of turns.
(C) Increase the magnetic field. (D) Increase the value of constant C.

Q.2 Write short answers of the following questions.

(8x2=16)

- Write down the factors upon which the force on current carrying conductor placed in a uniform magnetic field depends.
- Distinguish between magnetic flux and magnetic flux density. Write their SI units.
- State Ampere's law and write it in mathematical form.
- Why is B' non-zero outside a solenoid?
- Two charged particles are projected into a region where there is a magnetic field perpendicular to their velocities. If the charges are deflected in opposite directions, what can you say about them?
- Can an electron at rest be set in motion with a magnet? Explain.
- Why does the picture on a T.V screen become distorted when a magnet is brought near the screen?
- What is dead beat galvanometer?

NOTE: Attempt the long question.

(5+3=8)

- State Ampere's Law and apply it to find the magnetic field due to current carrying solenoid.
- What shunt resistance must be connected across a galvanometer of 50.0Ω resistance which gives full scale deflection with 2.0 mA current so as to Convert it in an ammeter of range 10.0 A?