



SMART TEST SERIES

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Name:		Subject:	Physics-12
Roll # :		Unit(s):	14,
Class:	Inter Part-II	Test:	Type 2 - SQs Test - Marks=40
Date:		Time:	

SHORT QUESTIONS TEST

1- Write short answers to any 7 questions: (7x2=14)

- (i) A plane conducting loop is located in a uniform magnet field that is directed along x-axis. For what orientation of loop is flux, a maximum. For what orientation is flux a minimum?
- (ii) State Ampere's law and write it in mathematical form.
- (iii) Can a charged particle move through a magnetic field without experiencing any force. If so, then how?
- (iv) How can a current loop be used to determine the presence of a magnetic field in a given region of space?
- (v) If a charged particle of charge "q" is moving a region with velocity "V" where there is an electric field E and magnetic field B', find total force on the particle.
- (vi) Why does the picture on a T.V screen become distorted when a magnet is brought near the screen?
- (vii) How can you use a magnetic field to separate isotopes of chemical element?
- (viii) How brightness on screen of CRO can be controlled?
- (ix) How can you convert a galvanometer in to voltmeter?
- (x) Define Ammeter. How can we increase the range of an ammeter?

2- Write short answers to any 7 questions: (7x2=14)

- (i) If a charged particle moves in a straight line through some region of space can you say that magnetic field in the region is zero or non-zero?
- (ii) Distinguish between magnetic flux and magnetic flux density. Write their SI units.
- (iii) Define magnetic flux and mention the factors upon which its depends?
- (iv) Describe the change in magnetic field inside a solenoid carrying a steady current I if length of solenoid is doubled but number of turns remains the same.
- (v) Describe the change in the magnetic field inside a solenoid carrying a steady current I, if the number of turns is doubled, but the length remain the same.
- (vi) Can an electron at rest be set in motion with a magnet? Explain.
- (vii) How can you explain the wave form of various voltages formed in CRO?
- (viii) A loop of wire is suspended between poles of a magnet with its plane parallel to the pole faces. What happens if a direct current is put through the coil? What happens if an alternating current is used instead?
- (ix) What is dead beat galvanometer?
- (x) Why a voltmeter should have very high resistance?

3- Write short answers to any 6 questions: (6x2=12)

- (i) If a charged particle moves in a straight live through some region of space can you say that magnetic field in the region is zero?
- (ii) Define Tesla. Write its mathematical formula.
- (iii) Give dimensions of permeability of free space μ_o
- (iv) Suppose that a charge "q" is moving in a uniform magnetic field with a velocity V. Why is there no work done by the magnetic force that acts on the charge "q".
- (v) What is meant by Lorentz force?
- (vi) Name main part of CRO.
- (vii) Define sweep voltage.
- (viii) What modifications are required convert a galvanometer into ammeter?
- (ix) Define AVO meter and Ohm meter.