



SMART TEST SERIES

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Name:		Subject:	Physics-12
Roll # :		Unit(s):	14,
Class:	Inter Part-II	Test:	Type 4 - SQs + LQs Test - Marks=40
Date:		Time:	

Q.1 Write short answers of the following questions.

(15x2=30)

- (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) Define Tesla. Write its mathematical formula.
- (iii) Distinguish between magnetic flux and magnetic flux density. Write their SI units.
- (iv) State Ampere's law and write it in mathematical form.
- (v) A solenoid 15cm long has 300 turns of wire. A current of A flows through it. What is the magnitude of magnetic field inside the solenoid?
- (vi) 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.
- (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) What is the function of grid in a cathode Ray oscilloscope?
- (x) How can you explain the wave form of various voltages formed in CRO?
- (xi) Define galvanometer. Write down its principle.
- (xii) 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?
- (xiii) Why a voltmeter should have very high resistance?
- (xiv) Define AVO meter and Ohm meter.
- (xv) What is digital multimeter? Give its two advantages over AVO meter.

Q.2 Write long answers of the following questions.

(5x2=10)

1. What is cathodes ray oscilloscope? Explain the function of i) Cathode ii) Grid iii) Anodes iv) Deflecting plates v) Sweep Generator.
2. A 20.0 cm wire carrying a current of 10.0 A is placed in a unifrom magnetic field of 0.30 T. If the wire makes an angle of 40° with the direction of magnetic field, find the magnitude of the force acting on the wire.