Physics - ICS Part 2 Physics Chapter 14 Short Questions Preparation

Q1. What is Time base generator?

Ans 1: A voltage that is applied across x plates is usually provided by a circuit that is build in CRO and is called sweep or time base generator.Its output waveform is a sawtooth voltage of period T.

Q2. What is current sensitive of a galvanometer?

Ans 1: A galvanometer which gives large deflection for the small current is called a sensitive galvanometer,The degree of deflection of galvanometer by unit current passing through it is referred as it sensitivity.It can be made more sensitive.

Q3. Is it possible to obtain an isolated north pole?Give reason.

Ans 1: No,the source of magnetism of an atom is the electrons,Accepting this view of magnetism it is concluded that it is possible to obtain an isolated north pole,The north pole is merely one side of a current loop.The other side will always be present as south pole and these can not be separated.This is an experimental reality.

Q4. How the beam of electron is focused on the screen of CRO?

Ans 1: CRO works by deflecting beam of electrons as they pass through uniform electric field between the two sets of parallel plates,The deflecting beam then falls on a fluorescent screen where it makes a visible spot.

Q5. Briefly give the function of Filament,Cathode,Grid and plates in C.R.O.

Ans 1: Filament: It heats the cathode.
Cathode: It emits the electrons.
Grid:It controls the number of electrons.
Plates: The two sets of plates are used to deflect the beam of electrons along x axis and y axis.

Q6. Define Tesla and write its formula.

Ans 1: If a magnetic field exerts a force of 1N on 1m length of the conductor placed at right angles to the magnetic field carrying a current of 1A then the strength of magnetic field is said to be one tesla.
$1\ T = 1\ NA^{-1}m^{-1}$

Q7. How can you explain the waveform of various voltage formed in CRO?

Ans 1: We can easily find the instantaneous value and peak value of the voltage with the help of calibration of y axis in volts.the time period can also be determined by using the time calibration of x axis information about the phase difference between two voltage can be obtained by simultaneously their waveforms.

Q8. What is AVO-meter?Explain

Ans 1: It is an instrument which can measure current in amperes potential difference in volts and resistance in ohms.It basically consists of sensitive moving coil galvanometer which is converted into multirange ammeter ,voltmeter or ohmmeter accordingly as a circuit.

Q9. Define magnetic flux and solenoid.

Ans 1: The number of magnetic field lines passing through certain elements of area is known as magnetic flux through that surface. A solenoid is a long tightly wound,cylindrical coil of wire,when current passes through such a coil ,it behaves like a bar magnet.

Q10. What is digital multimeter?Give its two advantage over AVO meter.

Ans 1: It is a digital version of AVO meter.It is used to measure resistance,voltage and current.
Advantage:

1. The digital values are displayed automatically with decimal point,polarity and the unit for voltage ,current and resistance.
2. These meters are generally easier to use because they eliminate the human error that often occur in reading the dial of an ordinary AVO meter.