Physics - ICS Part 2 Physics Chapter 14 Short Questions Preparation

Q1. Define electromagnetism and give the name of one device in which electromagnetism is used.

Ans 1: The branch of physics which deals with electricity and magnetism and the interaction between them is known as electromagnetism.
Electromagnetism is used in doorbells,electric motors such as electric fan etc.

Q2. Define energy.

Ans 1: The magnetic energy stored in the inductor per unit is referred as energy density.

Q3. If a charge particle moves in a straight line through some region of space,can you say the magnetic field in the region is zero?

Ans 1: The magnitude of a magnetic force on a charge particle is F=qVB sin theta
Magnetic field will be zero due to the following reasons.

1. Magnetic field strength B in the region is zero.
2. Magnetic field is parallel or antiparallel to the direction of motion.

Q4. Distinguished between sensitive and dead beat galvanometers.

Ans 1: A galvanometer which shows large deflection for a small value of unit current is sensitive one whereas a galvanometer in which the coil suddenly comes to rest after the current passed through it or the current is stopped from flowing through it is called dead beat out stable galvanometer.

Q5. Define galvanometer and cathode ray oscilloscope,

Ans 1: Galvanometer: Galvanometer is a device used to detect the passage of current.
Cathode ray oscilloscope:Cathode ray oscilloscope is a high speed graph plotting device.

Q6. Define stable galvanometer and Ohmmeter.

Ans 1: A galvanometer in which the coil comes to rest quickly after the current passed through it or the current is stopped from flowing through it is called Stable or Dead Beat galvanometer.
Ohmmeter is a useful device for rapid measurement of resistance.it measure resistance in Ohm.

Q7. What should be orientation of a current carrying coil in magnetic field so that the torque acting upon the coil is (a) maximum (b)minimum.

Ans 1: The torque experienced by a current carrying loop when placed in magnetic field is t=NIBA cos alpha.
When plane of the coil makes and angle of 0 degree with magnetic field ,the torque on the coil will be maximum.t=NIBA.
When plane of the coil makes and angle of 90 degree with magnetic field the torque on the coil will be zero or minimum.
t=NIBA cos 90 degree
t=0.

Q8. Can a charge at rest be set into motion by bringing a magnet close to it?

Ans 1: No a charge at rest can not be set into motion by bringing a magnet close to it.

Q9. A current in a conductor produce a magnetic field,which can be calculated by using Ampere's law.Since current is defined as the rate of flow of charge,what can you conclude about the magnetic field due to stationary charges?What about moving charges?

Ans 1: In case of stationary charges,the rate of flow of charges is zero.So there will be no magnetic field.But the moving charges produce current so the magnetic field produced around a current carrying conductor.

Q10. What is dead beat galvanometer?

Ans 1: The galvanometer in which the coil comes to rest quickly after current passed through it or the current is stopped from flowing through it,It is called stable or a dead beat galvanometer.