

**VIDYA BHAVAN, BALIKA VIDYAPEETH**  
**SHAKTI UTTAN ASHRAM, LAKHISARAI, PIN:-811311**

**SUBJECT:- PHYSICS**

**CLASS:- IXTH**

**DATE:-10/02/XXI**

**SUBJECT TEACHER:- MR. NEEL NIRANJAN**

**CHAPTER 4. (WORK, ENERGY AND POWER REVISION)(BASED ON NCERT PATTERN)**

**Question 1.** List three sources of magnetic fields.

**Answer:** (i) Current carrying conductor

(ii) Electromagnets

(iii) Permanent magnets

**Question 2.** When is the force experienced by a current-carrying conductor placed in a magnetic field largest ?

**Answer:** When the conductor carries current in a direction perpendicular to the direction of the magnetic field, the force experienced by the conductor is largest

**Question 3.** A coil of insulated copper wire is connected to a galvanometer. What will happen if a bar magnet is (i) pushed into the coil (ii) withdrawn from inside the coil (iii) held stationary inside the coil ?

**Answer:**

(i) As a bar magnet is pushed into the coil, a momentary deflection is observed in the galvanometer indicating the production of a momentary current in the coil.

(ii) When the bar magnet is withdrawn from the coil, the deflection of galvanometer is in opposite direction showing the production of an opposite current

(iii) When the bar magnet is held stationary inside the coil, there is no deflection in galvanometer indicating that no current is produced in the coil.

**Question 4.** Two circular coils A and B are placed closed to each other. If the current in the coil A is changed, will some current be induced in the coil B ? Give reason.

**Answer:** Yes, some current will be induced in the coil B. When the current in coil A is changed, some current is induced in the coil B. Due to change in current in coil A, the magnetic field lines linked with coil A and with coil B get changed. This sets up induced current in coil B.