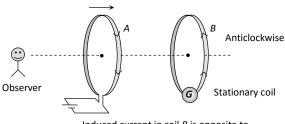
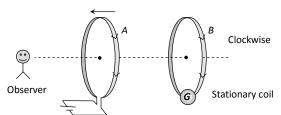
Some Standard Cases for Questions Based on Direction.

(1) Relative motion between co-axial circular coils

(i) When a current carrying coil moves towards/away from a stationary coil



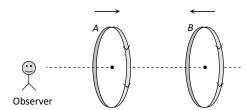
Induced current in coil *B* is opposite to the main current in coil *A*



Induced current in coil *B* is in the same direction to the main

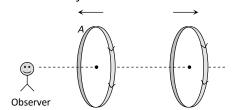
(ii) When two current carrying coils carries currents in the same direction and

Moves towards each other



Induced current in both the coils opposite to that of main current so current through each coil decreases

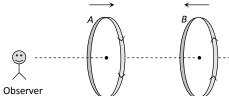
Moves away from each other



Induced current in both the coils assist the main current so current through each coil increases

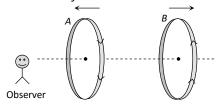
(iii) When two current carrying coils carries currents in the opposite direction and

Moves towards each other



Induced current in coil *A* is clockwise and that in coil *B* is anti-clockwise *i.e.* in both the coils induced current flows in the direction of main current. Hence current through both the coil increases

Moves away from each other

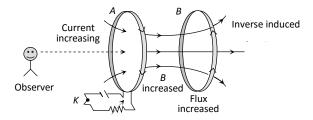


Induced current in coil *A* is anti-clockwise and that in coil *B* is clockwise *i.e.* in both the coils induced current flows in the direction opposite to main current. Hence current through both the coil decreases

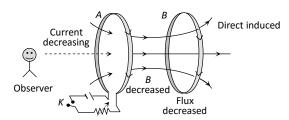
(2) When the inductive circuits are closed or opened

If two coils A and B (primary and secondary) are arranged as shown in the figure and if the primary circuit is closed or opened then the direction of induced current in secondary will be as follows

- (i) Current increases in coil A by pressing the key (ii) the key
- (ii) Current decreases in coil A by opening



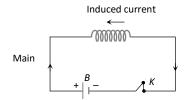
Direction of induced current in the secondary coil is opposite to that in the primary coil



Direction of induced current in the secondary coil is same as that in the primary coil

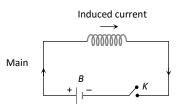
(3) Increasing and decreasing of current in current carrying coil

(i) When current increases by pressing the key opening the key



Direction of induced current in the coil will be in a direction opposite to that of main current.

(ii) When current decreases by



Direction of induced current in the coil will be same as that of the main current