April Wednesday 28 WEEK 18

SELF INDUCTION

Whenever there is any change in magnetic flux linked with a coil (due to the change of current in the circuit) then an induced e.m.f. is produced in it. This induced e.m.f. lasts only during the time in which the current is actually changing. This phenomena is called self induction.

We have,

$$\phi = LI \quad \text{and} \quad e = -L\frac{dI}{dt}$$

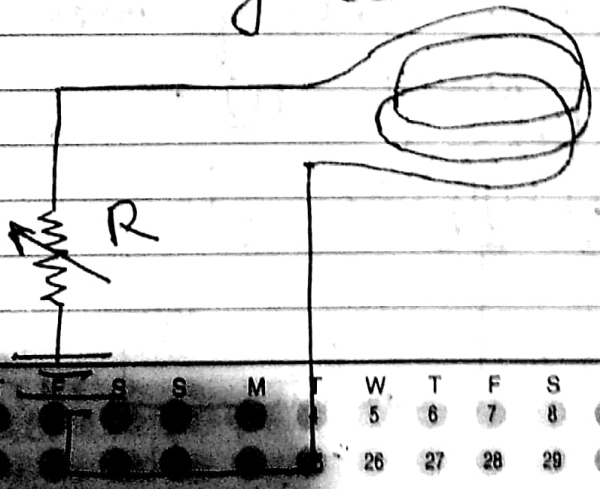
Where L is a constant and is called coefficient of self inductance.

April Thursday 29 WEEK 18

The -ve sign indicates that induced e.m.f. opposes the change in current.

This if dI is +ve, the e is -ve, and if dI is, -ve, then e is +ve.

The S.I. unit of self inductance is Henry (H).



Evening