Ans 1. Self induced emf is that which is induced in a coil, due to the change in its own current or flux. Mutual emf is that induced in a coil due to the neighbouring coil's varying current. The criterion for generation of emf is the relative motion between the conductor and the magnetic field. If the conductor is stationary and the flux is varying (sinusoidal), the induced emf is static or stationary induced emf. If the coil is moving (or rotating) and the magnetic field value is constant, then dynamic emf is induced. If we consider a single phase 2-wdg transformer, once we give it a sinusoidal supply, sine current induces sine flux, which induces emf in other coil, which is static.

(b) MAGNETIC FLUX:- The S.I unit of magnetic flux is the weber (Wb; in derived units, volt-second), and the CGS unit is the maxwell. Magnetic flux is usually measured with a flux meter, which contains measuring coils and electronics, that evaluates the change of voltage in the measuring coils to calculate the measurement of magnetic flux.

- RELUCTANCE:- The obstruction offered to the magnetic lines of force or magnetic flux is known as reluctance. The SI unit of reluctance is Ampere-turn / Weber. The unit of reluctance is Ampere-turn per weber (A-T/WB)

- MAGNETIC FLUX DENSITY: The tesla (Symbol T) is the derived SI unit of magnetic flux density, which represents the strength of a magnetic field. One tesla represent one weber per square meter.