**SHORT QUESTIONS AND ANSWERS**

**Magnetic Circuits**

1. What is magnetic circuit?

The closed path followed by magnetic flux is called magnetic circuit

1. Define magnetic flux?

The magnetic lines of force produced by a magnet is called magnetic flux it is denoted as Ф and its unit is Weber

1. Define magnetic flux density?

It is the flux per unit area at right angles to the flux it is denoted by B and unit is Weber/m2

1. Define magneto motive force?

MMF is the cause for producing flux in a magnetic circuit. the amount of flux setup in the core decent upon current(I)and number of turns(N). the product of NI is called MMF and it determine the amount of flux setup in the magnetic circuit

MMF=NI ampere turns (AT)

1. Define reluctance?

The opposition that the magnetic circuit offers to flux is called reluctance. It is defind as the ratio of MMF to flux. It is denoted by S and its unit is AT/m

1. What is retentivity?

The property of magnetic material by which it can retain the magnetism even after the removal of inducing source is called retentivity

1. Define permeance?

It is the reciprocal of reluctance and is a measure of the cause the ease with which flux can pass through the material its unit is wb/AT

1. Define magnetic flux intensity?

It is defined as the mmf per unit length of the magnetic flux path. it is denoted as H and its unit is AT/m

H=NI/L

1. Define permeability?

Permeability of a material means its conductivity for magnetic flux. Greater the permeability of material, the greaters its conductivity for magnetic flux and vice versa

1. Define relative permeability?

It is equal to the ratio of flux density produced in that material to the flux density produced in air by the same magnetizing force ; μr=μ/μ0

1. What is mean by leakage flux?

The flux does not follow desired path in a magnetic circuit is called leakage flux

1. What is leakage coefficient?

Leakage coefficient=total flux/useful flux

1. State faradays law of electromagnetic induction

Whenever a flux linking in the coil changes emf always induced in the conductor the magnitude of induced emf is proportional to rate of change flux linkage; e = N(dФ/dt)

1. Define mutual inductance?

The property of a coil to produce emf in a coil due to change in the value of current or flux in it is called mutual inductance

1. Define coefficient coupling?

It is defined as the fraction of magnetic flux produced by the current in one coil that links the other coil

1. What is dynamically induced emf?

An induced emf is produced by the movement of the conductor in a magnetic field. this emf is called dynamically induced emf. The dynamically induced emf; e =Blvsinϴ

1. What is fringing effect?

It is seen that the useful flux passing across the air gap tends to buldge outwords, there by increasing the effective area of the air gap and reducing the flux density in the gap is called fringing effect