Unit -2 Question Bank

Que:1 Derive the expression for flux linkage of a conductor due to internal flux. **{5 Marks}**

Que2: Derive the expression for flux linkage of a conductor due to external flux. **{5 Marks}**

Que:3 Derive the expression for inductance of a single phase overhead line with two parallel conductors. **{8 Marks}**

Que4: Derive the expression of inductance of a conductor in a group of several conductors **{8 Marks}**

Que:5 Derive the expression of inductance of a 3 phase line such that conductors are in symmetrical spacing.**{8 Marks}**

Que:6 Explain the concept of transposition of a line with neat diagram **{5 Marks}**

Que:7 Derive the expression of inductance of a 3 phase line such that conductors are in unsymmetrical spacing with and without transposition **{12 Marks}**

Que: 8 Explain the concept of GMR and GMD with the differences? **{5 Marks}**

Que:9 Calculate inductance per phase per meter for a three phase double circuit line whose phase conductors have a radius of 5.3 cm with the horizontal conductor arrangement as shown in figure below: **{8 Marks}**
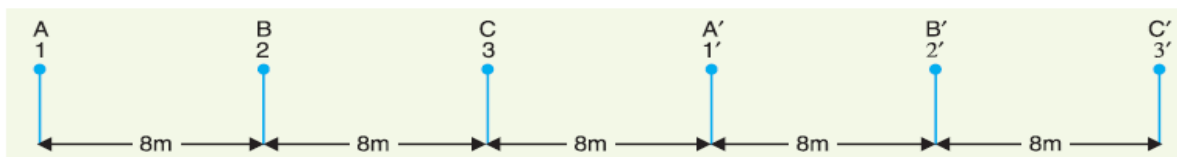

Fig 9

Que:10 The figure 6 shows the spacing of a double circuit 3 phase overhead line. The phase sequence is ABC and the line is completely transposed. The conductor radius is 1.3 cm. Find the inductance per phase per km. **{8 Marks}**

Fig 10