Unit -3 Question Bank

Que:1 Explain the concept of electric field lines. **{2 Marks}**

Que2: Derive the expression for potential difference between two points in a space. **{5 Marks}**

Que:3 Derive the expression for capacitance of a single phase overhead line with two parallel conductors without the effect of earth. **{8 Marks}**

Que:4 Derive the expression of capacitance of a 3 phase line such that conductors are in symmetrical spacing.**{8 Marks}**

Que:5 Derive the expression of capacitance of a 3 phase line such that conductors are in unsymmetrical spacing with and without transposition **{12 Marks}**

Que:6 Why self GMR concept is not visualized for capacitance? **{2 Marks}**

Que:7 Derive the expression for capacitance of a single phase overhead line with two parallel conductors with the effect of earth. **{8 Marks}**

Que:8 A three phase 50 Hz 66kV overhead line conductors are placed in horizontal plane as shown in figure 4. The conductor diameter is 1.25 cm . If length of line is 100km Calculate i) capacitance per phase
ii) charging current per phase, assuming complete transposition of line.

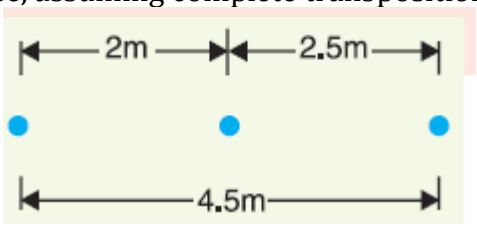

Fig 4

Que:9 A 3 phase, 50Hz, 132kV overhead line has conductors placed in horizontal plane 4m apart as shown in figure 6. Consider diameter is 2cm. If length of line is 100km calculate the charging current per phase assuming complete transposition.

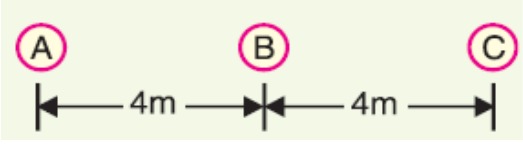

Fig 6