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**Unit -5 Question Bank**

Que:1 Give the classification of transmission line on the basis of length and voltages. **{2 Marks}**

Que2: What are ABCD Parameters of transmission line. What are the various properties of ABCD parameters **{5 Marks}**

Que:3 Explain the phenomena of Surge Impedance Loading **{5 Marks}**

Que:4 Explain the Nominal Pi Model with circuit diagram and phasor diagrams **{5 Marks}**

Que:5 Explain the Nominal T Model with circuit diagram and phasor diagrams **{5 Marks}**

Que:6 Define % Regulation and Transmission Efficiency **{5 Marks}**

Que:7 Explain the procedure to make the circle diagram **{5 Marks}**

Que:8 A three phase line delivers 3600kW at a 0.8 pf lagging to a load. If the sending end voltage is 33kV. Determine i) receiving end voltage ii) Line current iii) Transmission Efficiency. The resistance and reactance of each conductor are 5.31  $\Omega$  and 5.54  $\Omega$  respectively. **{8 Marks}**

Que:9 A short 3phase transmission line with an impedance of  $6+j8 \Omega$  per phase has sending end and receiving end voltage of 120kV and 110kV respectively for some receiving end load at a pf of 0.9 lagging. Determine i) Power output and ii) Sending end power factor. **{8 Marks}**

Que:10 A 3-phase, 50Hz, 150 km line has a resistance, inductive reactance and capacitive shunt admittance of 0.1  $\Omega$ , 0.5  $\Omega$  and  $3 \times 10^{-6}$  S per km per phase. If the line delivers 50 MW at 110 kV and 0.8 p.f. lagging, determine the sending end voltage and current. Assume a nominal  $\pi$  circuit for the line. **{8 Marks}**