

# **NETWORK ANALYSIS AND SYNTHESIS**

# Unit – II:

## Network Theorems (Applications to AC Networks)

- Superposition theorem,
- Thevenin's theorem,
- Norton's theorem,
- Maximum power transfer theorem,
- Reciprocity theorem
- Millman's theorem
- Compensation theorem Tellegen's theorem.

## 2.5 – Maximum Power Transfer Theorem

⚡ The maximum power transfer theorem states the following:

A load will receive maximum power from a network when its total resistive value is exactly equal to the Thévenin resistance of the network applied to the load. That is,

$$R_L = R_{Th}$$

# Maximum Power Transfer Theorem

- ⌘ For loads connected directly to a dc voltage supply, maximum power will be delivered to the load when the load resistance is equal to the internal resistance of the source; that is, when:

$$R_L = R_{int}$$

**THANKS....**

Queries Please...