

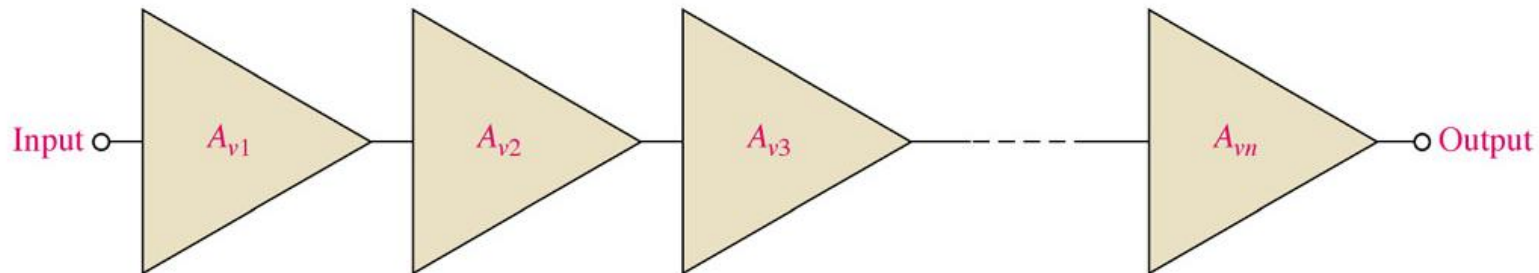
# Lecture 17

- RC coupled amplifier

# Multistage Amplifiers

Two or more amplifiers can be connected to increase the gain of an ac signal. The overall gain can be calculated by simply multiplying each gain together.

$$A'_v = A_{v1}A_{v2}A_{v3} \dots\dots$$



# Introduction

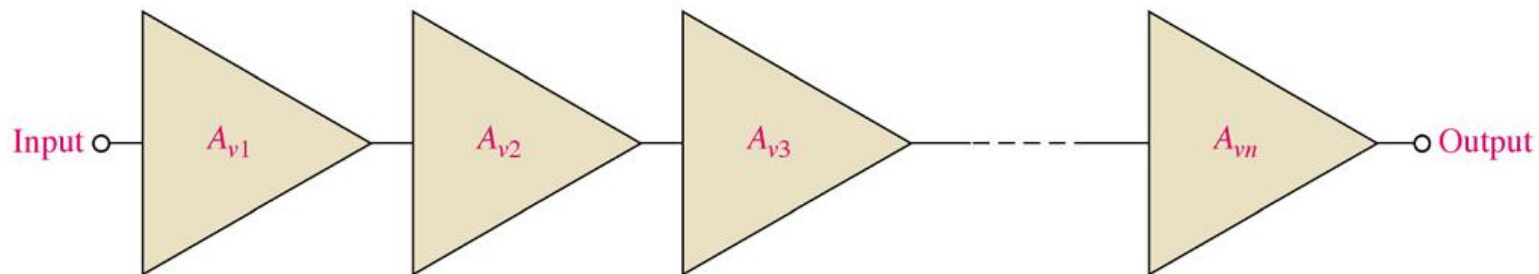
- Many applications cannot be handle with single-transistor amplifiers in order to meet the specification of a given amplification factor, input resistance and output resistance
- As a solution – transistor amplifier circuits can be connected in series or cascaded amplifiers
- This can be done either to increase the overall small-signal voltage gain or provide an overall voltage gain greater than 1 with a very low output resistance

# Multistage Amplifiers

Multi-stage amplifiers are amplifier circuits cascaded to increased gain. We can express gain in decibels(dB).

Two or more amplifiers can be connected to increase the gain of an ac signal. The overall gain can be calculated by simply multiplying each gain together.

$$A'_v = A_{v1}A_{v2}A_{v3} \dots\dots$$



# Example

Find  $V_{\text{out}}$

