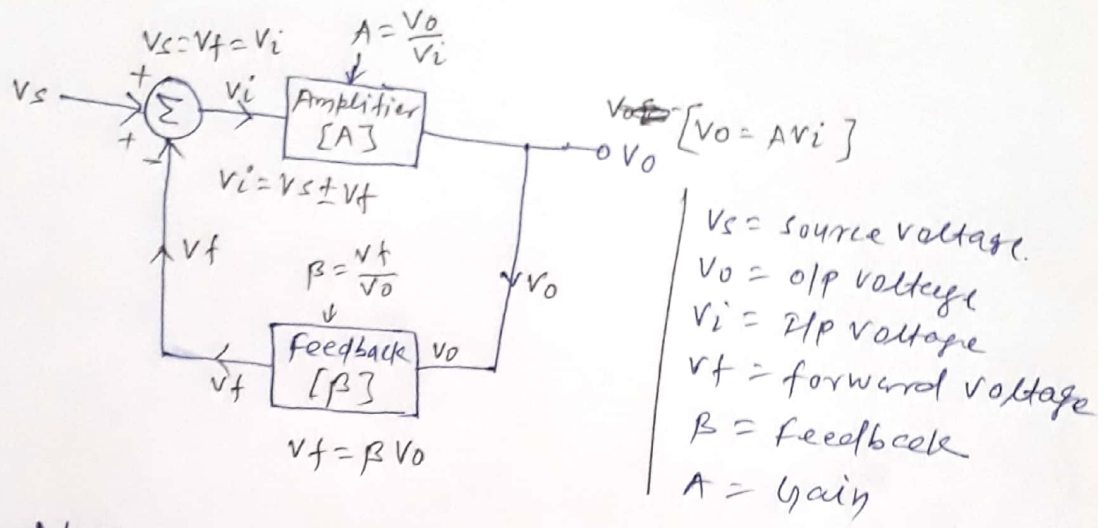


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Subject: - Analog Circuit
(EC- 2nd yr, 4th sem.)

Effect of Feedback on Gain (A)

(62)



Now, $V_o = A V_i$

$V_o = A [V_s \pm V_f]$

$V_o = A [V_s \pm \beta V_o]$

$V_o = A V_s \pm A \beta V_o$

$V_o - A \beta V_o = A V_s$

$V_o (1 - A \beta) = A V_s$

$\therefore \frac{V_o}{V_s} = \frac{A}{(1 - A \beta)} = A_{vf}$

So, positive f/b | Negative feedback

$A_{vf} = \frac{A}{(1 - A \beta)}$

$A_{vf} = \frac{A}{(1 + A \beta)}$