

Department of ECE

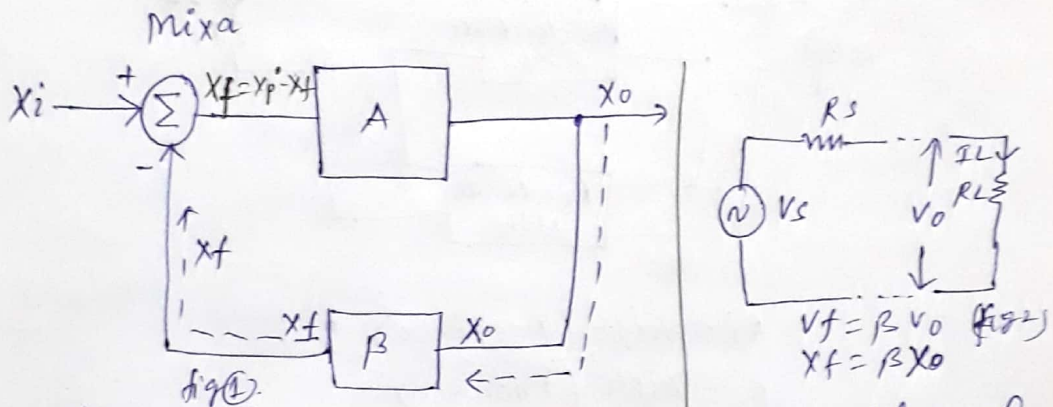
Name of faculty: → Er. Vijay Kr. Ram

Subject: - Analog Circuit.

(EC - 2nd yr, 4th sem.)

Query Time: → 03:00 pm - 04:00 pm.

Methodology to identify junctions Topology.



→ if $V_o = 0$ is make zero (0), then X_f should equal to zero. This means voltage sampling is present.

→ if $I_L = 0$ by making it ∞ , then $X_f = 0$, current sampling is there.
from fig 2.

$$V_f = \beta V_o$$

$$X_f = \beta X_o \begin{cases} V_o \rightarrow X_f = \beta V_o \Rightarrow V_o = 0 \Rightarrow X_f = 0 \\ I_L \rightarrow X_f = \beta I_L \end{cases}$$

Voltage Sampling.

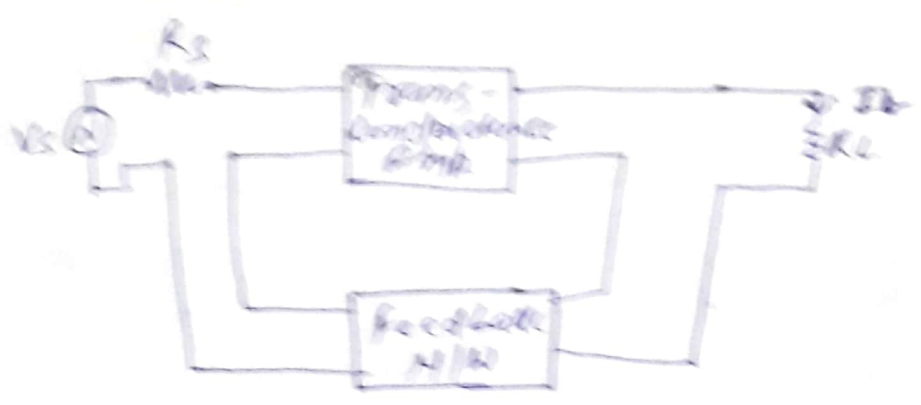
$$\Downarrow$$

$$X_f = 0$$

Current Sampling.

→ if X_c is connected in series with X_i that called series mixing.

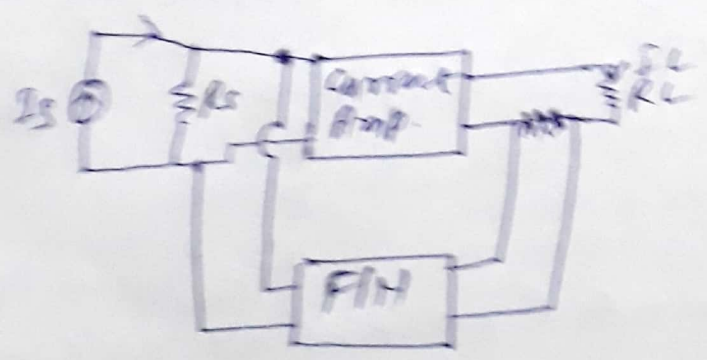
→ if X_f appears across X_i that is shunt mixing.



$R_i = \text{high (Increase)}$
 $R_o = \text{high (Increase)}$

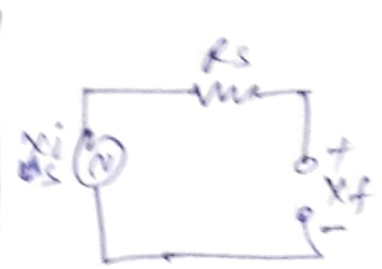
4. Current-shunt topology.

Current shunt = current + shunt
 ↑ ↑
 O/P S/P
 = Series sampling + shunt mixing



$R_i = \text{low (decrease)}$
 $R_o = \text{high (Increase)}$

or



6.7.18 identity feedback topology:-

