



**SRI VASAVI INSTITUTE OF ENGINEERING & TECHNOLOGY**  
**DEPARTMENT OF ELECTRONICS & COMMUNICATION ENGINEERING**

**Think-Pair-Share**

Subject: LCS

Class: II B.Tech II Sem

A.Y:2022-23

Topic: Block diagram reduction technique

The Think-Pair-Share (TPS) method is an active learning strategy that enhances student engagement and comprehension. It is particularly useful for teaching complex topics like block diagram reduction technique, which involves solving blocks, moving summing points and branch points.

**Step-by-Step Implementation of TPS for Block diagram reduction technique**

**1. THINK (Individual Reflection)**

Instructor Action:

Begin by explaining the basic concept of block diagram, its elements, rules to reduce the blocks by combining blocks which are in cascade, parallel and in feedback, moving branch and summing points. Prompt the students with a block diagram and ask them to independently analyze how to reduce it.

Student Task:

- Identify series/parallel blocks
- Locate feedback loops
- Think about possible rearrangements (moving summing or pick-off points)

Students attempt to solve it individually for 4-5 minutes.

**2. PAIR (Discussion in Pairs)**

Instructor Action:

Ask students to pair up with a classmate and discuss their answers. They can discuss whether their answers are matching or not.

Student Task: Students compare answers, discuss which rule to apply first, any challenges they faced to move summing and branch points.

**3. SHARE (Classroom Discussion & Explanation)**

Instructor Action:

Invite pairs to share their approach or final simplified diagram with the class.

- Summarizes key strategies used
- Highlights correct application of reduction rules
- Clears up common errors (e.g., incorrect feedback loop simplification)

Student Task: Engage in class discussion, ask questions, and refine their understanding of impedance.

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