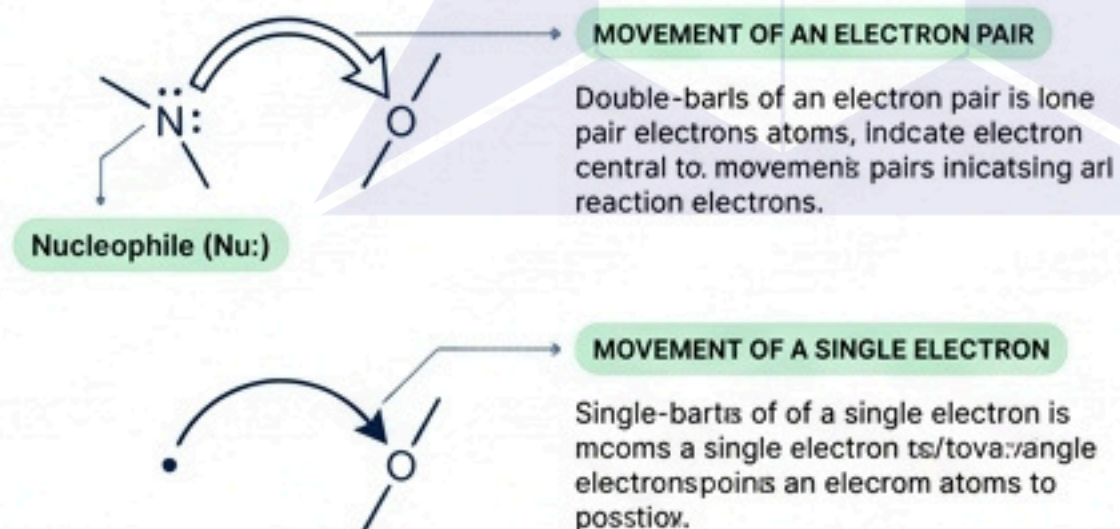


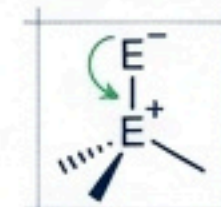
Electron Movement in Organic Reactions

Mastering Curved-Arrow Notation: The essential visual language for tracking electron pairs and reaction mechanisms.

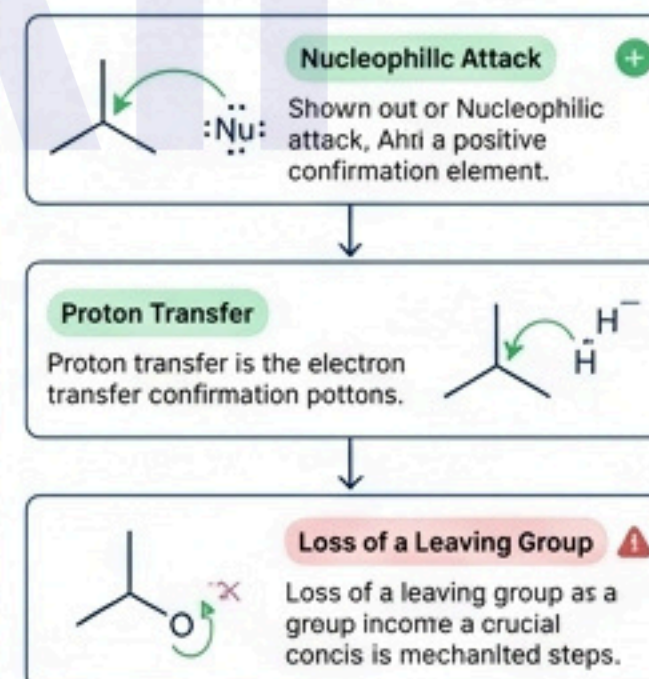
FUNDAMENTALS OF CURVED-ARROW NOTATION



KEY REACTION COMPONENTS & ROLES

NUCLEOPHILE (Nu:)	ELECTROPHILE (E+)
✓ Electron-rich ✓ Attacks positive centers ✓ Electron-donors ✓ Lewis Base	✓ Electron-deficient ✓ Accepts electrons ✓ Electron-acceptors ✓ Lewis Acid
	
⚠ Exceptions: Movements on simple molecules positive electron centres.	⚠ Exceptions: Lewis compounds & complexes to reevaluate mechanisms

COMMON MECHANISM STEPS



The Golden Rule of Reaction Notation

WHAT IT IS

Movement of Electrons

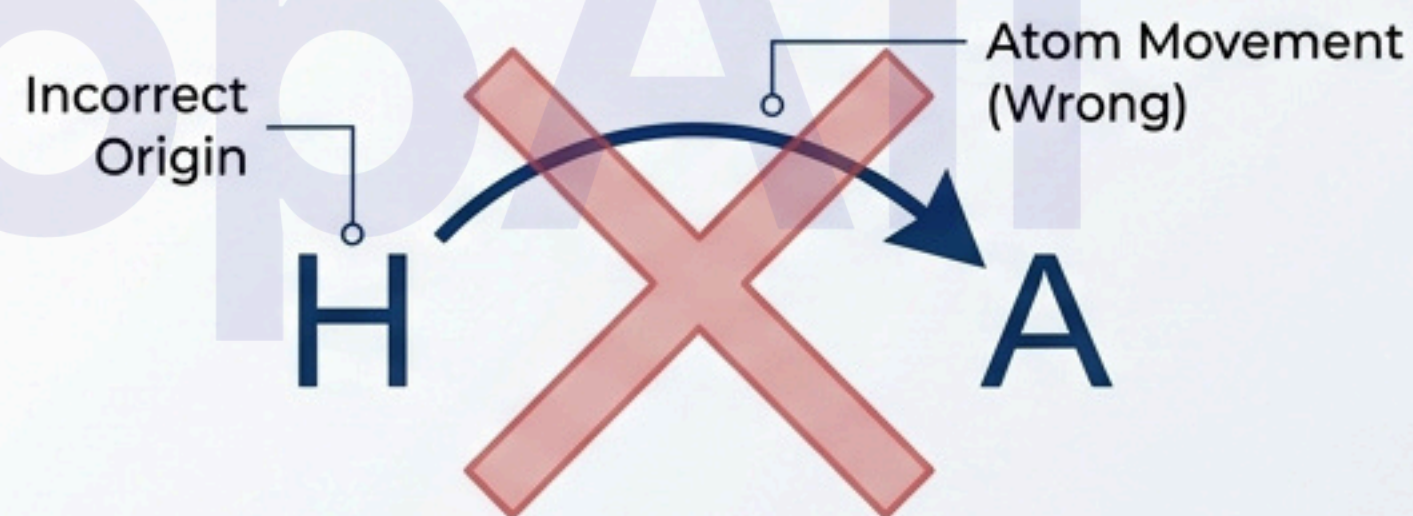
Curved arrows strictly represent the transfer or shifting of electron pairs.



WHAT IT IS NOT

Movement of Atoms

Curved arrows never show the physical movement of atoms or nuclei across space.



Pro-Tip: If your arrow starts at an atom's letter rather than its bonds or lone pairs, it is drawn incorrectly!



You've Learned the Theory. Let's Test Them Now.

$$E=mc^2$$



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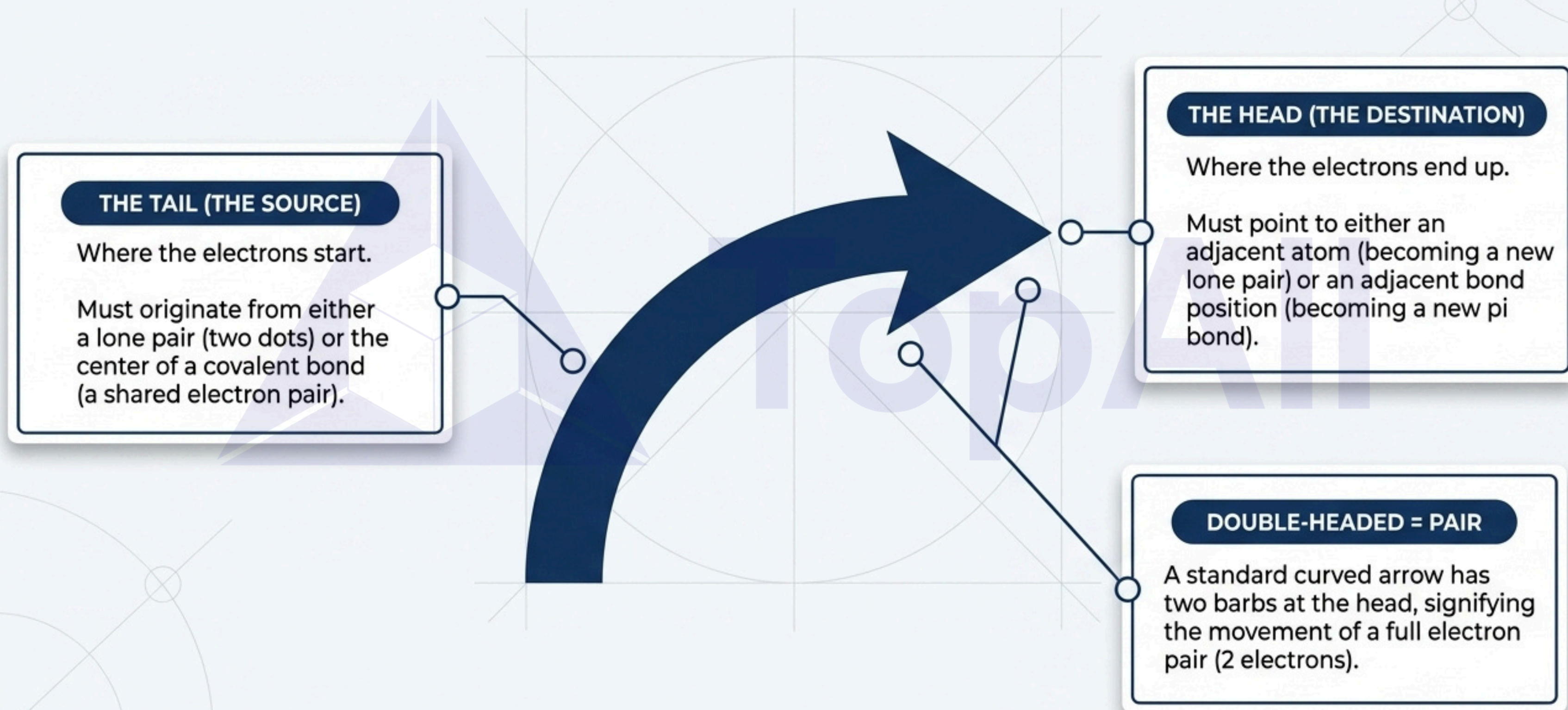
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Key Highlights

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- » Practice Unlimited MCQs for NEET & JEE
- » Get Clear Explanations, Not Just Marks
- » Track Your Performance Smarter



Anatomy of an Electron Shift



Mechanism in Action: pi-Bond Cleavage

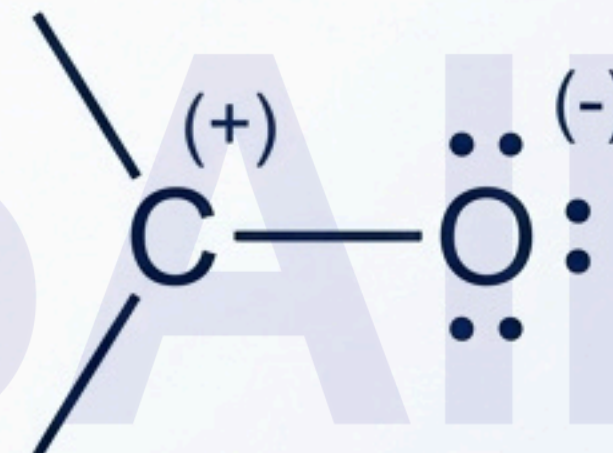
STEP 1: THE SHIFT



The more electronegative Oxygen atom pulls the pi-electron pair toward itself. The arrow's tail is at the bond; the head is on the atom.



STEP 2: THE RESULT



The double bond is now a single bond. The shifted electrons have become a new lone pair on Oxygen, generating formal charges.

Mastery Check: Curved-Arrow Notation

- ✓ **Electrons, not atoms:** Always track the negative charge. Atoms only move as a consequence of electron movement.
- ✓ **Tail marks the spot:** Begin every arrow exactly at a lone pair or the center of a bond.
- ✓ **Head defines the future:** Point the arrow exactly where the new bond will form or which atom will receive the lone pair.
- ✓ **Conservation of Charge:** The net charge of the system must remain identical before and after the electron shift.

**Exam Focus:* Perfecting this notation is the absolute foundation for tracking all organic reaction mechanisms.



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