Indian Economy · GS - III

Examine the strategic importance of copper for India's energy transition and industrial development. Discuss measures to reduce import dependence and promote sustainable domestic copper production.

EXAM YEAR	PAPER	SUBJECT
DAILY PRACTICE 09/11/2026	GS - III	Indian Economy

MARKS	WORD LIMIT
10	~150 words

Answer Hint

Critical minerals, electrical conductivity, renewable energy, electric vehicles, power grids, import dependence, overseas mineral assets, domestic mine auctions, urban mining, recycling, circular economy, environmental safeguards.

Model Answer

Introduction

Copper is a strategically important industrial metal due to its high electrical conductivity, durability and recyclability. Its demand is increasing with India's clean energy transition and industrial expansion.

Strategic Importance

- **Renewable energy:** Solar and wind installations require copper in electrical systems and connections.
- **Electric mobility:** Electric vehicles use copper in motors, batteries and wiring.
- **Power infrastructure:** Transmission networks and grid modernisation depend heavily on copper.
- **Industrial growth:** Construction, electronics and manufacturing require copper-based components.

Measures to Reduce Import Dependence

1. Accelerate transparent domestic mineral exploration and mine auctions.
2. Secure overseas mining assets through strategic international partnerships.
3. Expand recycling of copper scrap and recover metals from electronic waste.
4. Encourage advanced processing technologies and efficient resource utilisation.
5. Strengthen environmental safeguards and responsible mining practices.

Conclusion

A combination of domestic exploration, overseas partnerships and circular-economy initiatives can strengthen India's copper security while supporting sustainable industrial growth.

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