Indian Economy · GS - III

Examine the role of semiconductor exports in economic growth and discuss the risks arising from dependence on global technology supply chains.

EXAM YEAR	PAPER	SUBJECT
DAILY PRACTICE 02/11/2026	GS - III	Indian Economy

MARKS	WORD LIMIT
10	~150 words

Answer Hint

Export earnings; manufacturing; employment; technological innovation; global supply chains; geopolitical tensions; trade diversification; domestic semiconductor capacity

Model Answer

Introduction

Semiconductors are essential inputs for electronics, telecommunications, automobiles, artificial intelligence and defence systems. Countries with strong semiconductor industries can benefit from export earnings, investment and technological advancement.

Role in Economic Growth

1. Export Performance: Strong semiconductor demand can increase export revenues, improve trade performance and support industrial output.

2. Employment and Investment: Semiconductor manufacturing attracts capital, develops skilled employment and supports related industries, including electronics design and equipment production.

3. Technological Development: Research in chip design and fabrication strengthens innovation and industrial competitiveness.

Risks of Global Dependence

Concentrated manufacturing capacity creates vulnerabilities to geopolitical tensions, export controls, natural disasters and supply disruptions. Semiconductor production also requires substantial investment, advanced technology, reliable electricity and water supplies.

Way Forward for India

India should strengthen domestic chip fabrication, packaging and testing capabilities; develop semiconductor skills; support research and development; and attract investment through predictable policies. Diversifying international partnerships and building resilient supply chains can reduce external vulnerabilities.

Conclusion

Semiconductors are strategically important for both economic growth and national security. India needs a balanced approach combining domestic capability, technological innovation and international cooperation.

BECOME IAS
AI POWERED UPSC PREP