Defence & Security · GS - III

Examine the significance of indigenous warship modernisation in strengthening India's maritime security and defence industrial ecosystem. What challenges must be addressed to achieve self-reliance in naval technology?

EXAM YEAR	PAPER	SUBJECT
DAILY PRACTICE 11/11/2026	GS - III	Defence & Security

MARKS	WORD LIMIT
10	~150 words

Answer Hint

Naval capability, propulsion technology, operational readiness, lifecycle extension, indigenous defence manufacturing, technology absorption, shipyard capacity, maintenance infrastructure, import dependence, technology transfer, Atmanirbhar Bharat.

Model Answer

Introduction

Naval modernisation is essential for safeguarding India's maritime interests, particularly across the strategically important Indian Ocean Region. Upgrading existing warships can improve operational readiness while extending their service life.

Significance of Indigenous Modernisation

- **Operational capability:** Modern propulsion and equipment can improve reliability, maintainability and mission readiness.
- **Cost effectiveness:** Upgrading existing platforms may be more economical than replacing them entirely.

- **Industrial development:** Domestic shipyards gain expertise in complex engineering, integration and maintenance.
- **Strategic autonomy:** Indigenous capabilities reduce dependence on foreign suppliers for critical defence support.
- **Employment and innovation:** Modernisation projects create opportunities for skilled employment and technology development.

Key Challenges

India continues to face gaps in advanced propulsion systems, specialised components and critical technologies. Delays, cost escalation, limited research-industry collaboration and dependence on imported subsystems can constrain self-reliance.

Way Forward

Strengthening naval research, public-private partnerships, technology transfer, indigenous component manufacturing and skilled workforce development is essential.

Conclusion

Warship modernisation should form part of a comprehensive naval industrial strategy that combines operational preparedness with technological innovation and long-term strategic autonomy.

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