Science & Technology · GS - III

Discuss the significance of developing indigenous Artificial Intelligence capabilities for India's digital sovereignty, economic self-reliance and national security.

EXAM YEAR	PAPER	SUBJECT
DAILY PRACTICE 31/10/2026	GS - III	Science & Technology

MARKS	WORD LIMIT
10	~150 words

Answer Hint

AI sovereignty; indigenous AI models; data privacy; national security; Indian languages; digital infrastructure; technological self-reliance; global cooperation

Model Answer

Introduction

Artificial Intelligence is becoming critical to economic growth, governance and national security. Excessive dependence on foreign AI technologies may create strategic vulnerabilities for India.

Significance of Indigenous AI

- **Digital Sovereignty:** Domestic AI capabilities strengthen India's control over critical digital infrastructure and technological choices.
- **Data Protection:** Locally governed systems can improve control over sensitive data and privacy safeguards.
- **Linguistic Inclusion:** Models trained on Indian languages can make AI-based services accessible to diverse communities.

- **Economic Opportunities:** Indigenous AI development can encourage innovation, startups, skilled employment and domestic investment.
- **National Security:** Domestic capabilities can reduce strategic dependence in sensitive sectors such as defence and critical infrastructure.

Challenges and Way Forward

High computing costs, limited high-quality datasets, talent gaps and infrastructure constraints remain significant challenges. India should promote public-private partnerships, research institutions, indigenous computing capacity and robust data-governance frameworks. International cooperation should complement, rather than replace, domestic capability-building.

Conclusion

India's AI strategy must balance technological self-reliance with global collaboration to ensure secure, inclusive and sustainable digital development.

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