Science & Technology · GS - III

Examine the significance of India's NavIC navigation system in strengthening strategic autonomy and improving public service delivery.

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

MARKS	WORD LIMIT
10	~150 words

Answer Hint

Indigenous space technology; strategic autonomy; regional navigation; precision timing; disaster management; civil aviation; technological self-reliance

Model Answer

Introduction

India's Navigation with Indian Constellation (NavIC), developed by ISRO, is an indigenous regional satellite navigation system providing positioning, navigation and timing services.

Significance of NavIC

1. **Strategic autonomy:** It reduces dependence on foreign navigation systems and strengthens India's technological independence.
2. **Regional coverage:** It provides navigation and timing services across India and its surrounding region.
3. **Disaster management:** Accurate positioning supports emergency response, search and rescue operations and disaster coordination.
4. **Civil aviation:** Satellite-based navigation can improve route efficiency, operational accuracy and aviation safety.
5. **Precision timing:** Advanced atomic clocks enhance the accuracy and reliability of navigation services.

6. **Economic applications:** NavIC can support transportation, fisheries, logistics, surveying and location-based services.

Way Forward

India should strengthen satellite reliability, expand compatible user devices, promote private-sector participation and improve public awareness.

Conclusion

Continuous modernisation of NavIC, including next-generation NVS satellites, can strengthen India's strategic autonomy and expand the societal benefits of indigenous space technology.