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Topic wise content



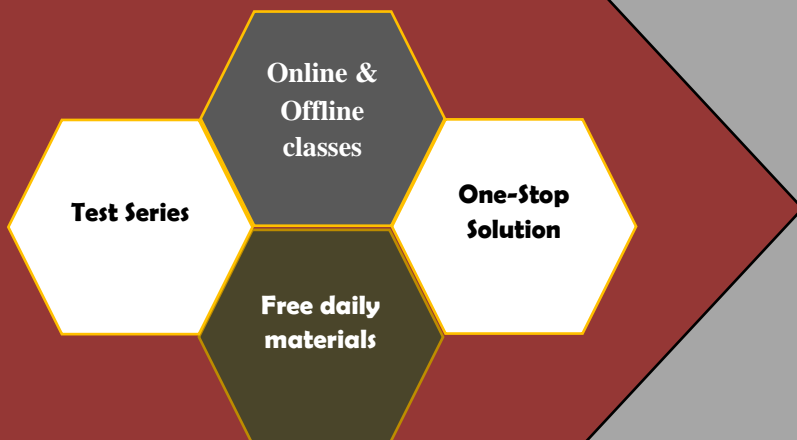
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Navigation in Indian Constellation (NavIC)

Notes for civil services preparation



UPSC

General Studies

NavIC

PROVIDES INDIA WITH ASSURED NAVIGATION SERVICE FOR VITAL CIVILIAN & MILITARY APPLICATIONS WITHOUT HAVING TO DEPEND ON ANOTHER COUNTRY; FIRST SATELLITE TO BE LAUNCHED ON JULY 1; REMAINING 6 BY 2015

www.indiandefensenews.in

NAVIC : INDIAN REGIONAL NAVIGATION SATELLITE SYSTEM

7 SATELLITES

3 GEOSTATIONARY

4 GEOSYNCHRONOUS

ORBIT ALTITUDE **36,000** KM

COST **₹ 1,420** CRORES



Covers India and up to 1,500 km beyond its borders	3 extremely accurate rubidium atomic clocks in each satellite	GPS receivers will not work; need special receivers (yet to be developed)
IRNSS provides Standard Positioning Service	Open to all users	Accuracy better than 20 metres
3 satellites in geostationary orbit – appear from ground to be at fixed positions in the sky	4 satellites in geosynchronous orbit – in pairs, move in two inclined orbits – appear from ground to travel in figure '8' – assist in accurate position determination	

- The Indian Space Research Organisation (ISRO) and its commercial arm Antrix Corporation Ltd. are set to commercialize India's regional navigation satellite system - Navigation in Indian Constellation (NavIC).

Potential Uses:

- Terrestrial, aerial and marine navigation;
- Disaster management;
- Vehicle tracking and fleet management (especially for mining and transportation sector);
- Integration with mobile phones;
- Precise timing (as for ATMs and power grids);
- Mapping and geodetic data capture.

Navigation in Indian Constellation

- Navigation in Indian Constellation (NavIC) is an Indian Regional Navigation Satellite System (IRNSS), developed by the Indian Space Research Organization (ISRO).
- IRNSS consists of eight satellites, three satellites in geostationary orbit and five satellites in geosynchronous orbit.
- The main objective is to provide reliable position, navigation and timing services over India and its neighbourhood.

- It works just like the established and popular U.S. Global Positioning System (GPS) but within a 1,500-km radius over the sub-continent.
- It has been certified by the 3rd Generation Partnership Project (3GPP), a global body for coordinating mobile telephony standards.

