

**03-05-2022****Gagan Satellite Technology****Why in newspapers?**

India achieved a major milestone after the Airports Authority of India (AAI) successfully test fired the latest indigenous Satellite-Based Augmented System (SBAS) technology named GAGAN (GAGAN – GPS Aided GEO Augmented Navigation)

Quick Issue?

- IndiGo became the first airline in Asia to use this indigenously developed satellite based navigation system while landing at Kishangarh airport in Rajasthan.
- India is the first country in the Asia Pacific region to have achieved this feat

Historical Background?

- It is jointly developed by the Airports Authority of India (AAI).
- By using uplink and reference stations, this system provides improvements to the Global Positioning System (GPS) signal to improve the management of air traffic.
- It is a satellite-based augmentation system that provides satellite-based navigation services with the integrity and accuracy required for civil aviation applications.
- Better air traffic management can be provided in Indian airspace through the use of this system.
- The system is interoperable with other international SBAS systems that are in use around the world and will be able to provide seamless navigation across regional borders.
- GAGAN is available through Signal-in-Space (SIS) GSAT-10 and GSAT-8. For the purpose of precise landing, the aircraft has to rely on radio navigation assistance.
- However, smaller airports lack modern navigation aids. Therefore, the visibility requirements in such airports are very high.
- As the visibility requirement for all regular passenger flights at Kishangarh airport is 5,000 meters, but by using GAGAN technology, an aircraft can operate with a visibility of around 800 metres.
- GAGAN provides extremely accurate information about the location of the aircraft, which includes various parameters such as longitude, latitude and altitude.

OTHER IMPORTANT FACTS?

- The Corporate Headquarters is located at Rajiv Gandhi Bhawan Safdarjung Airport, New Delhi. The Airports Authority of India (AAI) manages a total of 125 airports which include 11 international airports, 8 customs airports, 81 domestic airports and 25 civil enclaves in defence airfields.

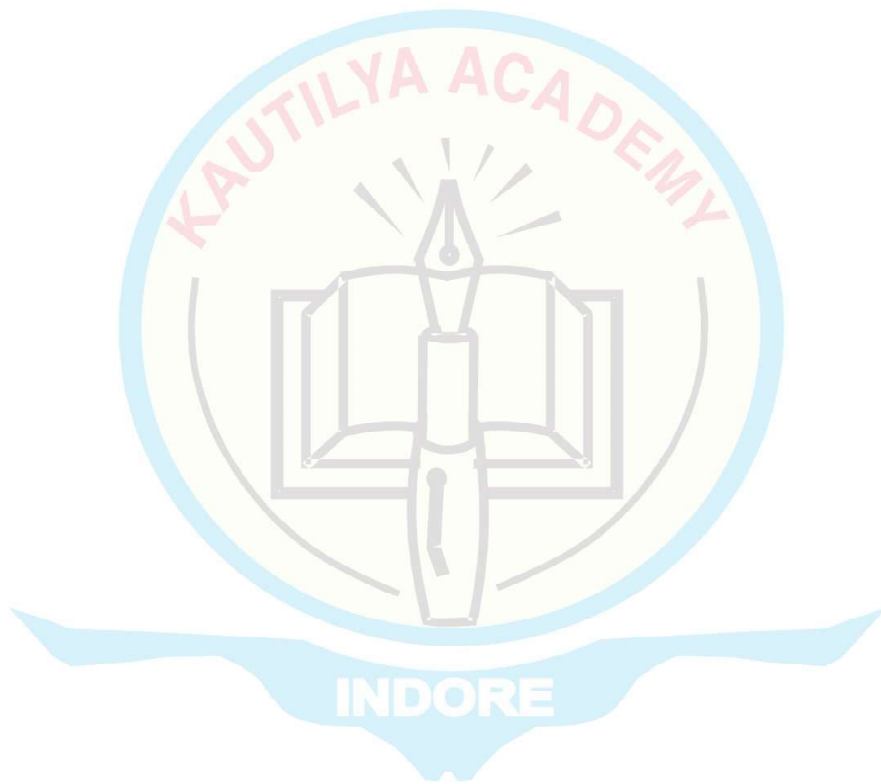


Likely Question Asked in Preliminary Exam

Question: Earth's satellite keeps moving in its orbit. This is due to the phenomenon provided by centripetal force?

- (A) rocket engine propelling the satellite
- (B) Earth's gravitational attraction on the satellite
- (C) gravitational attraction of the Sun on the satellite
- (D) gravitational attraction of the satellite on the earth

Ans - (B) Earth's gravitational attraction on the satellite





Atal New India Challenge 2.0

Why in newspapers?

Atal Innovation Mission launched Phase-I of the second edition of 'Atal New India Challenge' (ANIC 2.0).

Quick Issue?

- ANIC 1.0 was launched in the year 2018 with a call to make innovations and technologies relevant to the people.
- Atal New India Challenge is a flagship program of Atal Innovation Mission, NITI Aayog.
- The objective of the program is to seek, select, support and promote technology-based innovations that address regional challenges of national importance and social relevance.
- ANIC supports the selected startups in the commercialization phase during 12-18 months with solicitation of innovations in the prototype phase.

Historical Background?

- To solve problems of national importance and social relevance (production) by manufacturing products based on existing technologies.
- Helping to find new solutions, markets and initial customers (commercialisation) in the context of India.
- To encourage innovations in important areas like education, health, water and sanitation, agriculture, food processing, housing, energy, mobility, space etc. for India's continued growth and development.
- Support innovators on the risks associated with access to resources for testing, piloting and market building, as well as identifying the 'Commercialization Valley of Death' (the difference between research and commercialisation).
- ANIC 1.0 created an open innovation challenge format where challenge statements were published in the public domain and calls for applications were made.
- Installment based grant-in-aid up to Rs.1 crore is provided to startup winners/ individual innovators through AIM's innovation network.
- The first phase of ANIC 2.0 will tackle 18 challenges across 7 sectors, including e-mobility, road transport, space technology and applications, sanitation technology, medical equipment and materials, waste management and agriculture.
- AIM is a flagship initiative of the Government of India to promote a culture of innovation and entrepreneurship in the country.
- It aims at developing new programs and policies to promote innovation in various sectors of the economy, providing forums and opportunities for collaboration to various stakeholders, raising awareness among people and creating an umbrella/ umbrella to oversee the innovation ecosystem of the country. Umbrella Structure is to be developed.



- Atal Tinkering Laboratory: Through this, to solve the problems of the students in the schools of the country, their mental development is to be done.
- Atal Incubation Center: These have been established to promote world class startups and add a new dimension to the incubator model.
- Challenges of Atal New India: Promoting product innovations and tailoring them to the needs of different sectors/ministries.
- Mentor India Campaign: A national mentor network built in collaboration with the public sector, corporates and institutions to support all initiatives of the Mission.
- Atal Community Innovation Centre: To encourage community centric innovation and ideas in unprotected/protected areas of the country including Tier 2 and Tier 3 cities.
- Atal Research and Innovation for Small Enterprises (ARISE): To encourage innovation and research in the MSME industry.

Likely Question Asked in Preliminary Exam

Question - Atal New India Challenge is a major program of Atal Innovation Mission of which institute?

- (A) NITI Aayog
- (B) Child Protection Commission
- (C) Union Public Service Commission
- (D) Law Commission

Ans - (A) NITI Aayog

