

27 Oct 2022: PIB Summary for UPSC

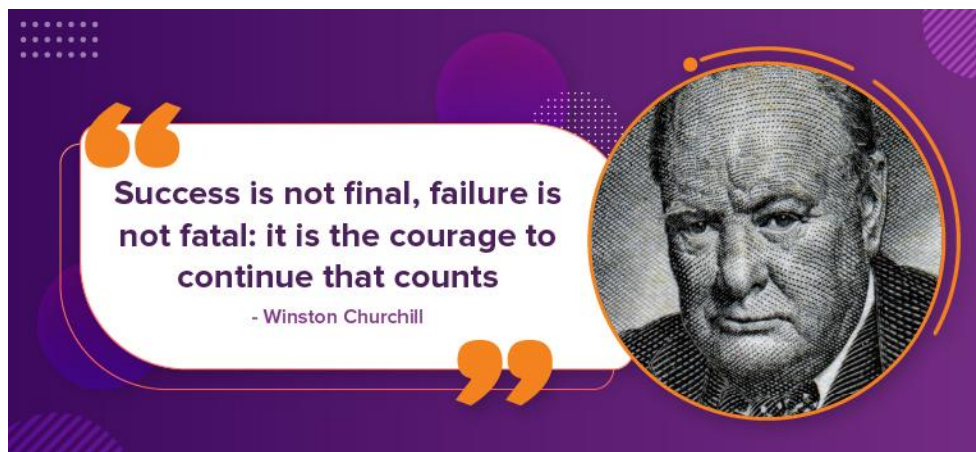


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1. Overhauser (OVH) Magnetometer

Syllabus - GS 3, Achievements of Indians in science & technology; indigenization of technology and developing new technology.

Prelims - Indigenous OVH Magnetometer.

Context - India's first indigenous OVH Magnetometer developed by Indian Scientists of IIG (Indian Institute of Geomagnetism).

Details -

- One of the most accurate magnetometers widely used by all magnetic observatories all over the world has been developed by Indian scientists. The IIG (Indian Institute of Geomagnetism), an autonomous institute under DST (Department of Science &

Technology) has developed OVH Magnetometer as a part of its technology development program.

- A magnetometer is an instrument used for measuring magnetic forces, especially the earth's magnetism.
 - It has been installed at Alibag Magnetic Observatory (MO) and can absolve the dependence of India on commercial OVH Magnetometers for performing geomagnetic field measurements.
 - OVH Magnetometers are highly accurate, very sensitive and consume power efficiently and therefore, find applications in all MOs across the world as well as in international space programs.
 - Various spectroscopic tools and theoretical simulations were used to understand the working of the OVH sensor. Also, various control experiments like varying the sensor composition and examining the sensor's performance were carried out. This helped to optimise the sensor parameters and its associated electronics, which finally led to a very efficient and stable OVH sensor.
 - The performance of the OVH sensor installed at Alibag is at par with the commercial ones installed at the MOs of IIG. The sensor developed is currently being tested for its long-term stability.
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2. 76th Infantry Day

Syllabus - GS 3, Various Security forces and agencies and their mandate.

Prelims - October 27 observed as Infantry Day.

Context - Indian Army celebrates 76th Infantry Day.

Details -

- Infantry Day is celebrated every year on October 27 to mark the landing of the first infantry soldiers in Srinagar, Kashmir (1947) who took part in an action to defend Indian territories from Pakistani invaders. The infantry is the largest fighting arm of the Indian army.
 - The day is also marked as 'Shaurya Diwas'.
 - To mark the 76th Infantry Day, the Indian Army organised bike rallies from four cardinal directions. The rallies commenced their journey on October 16 from Udhampur (Jammu and Kashmir), Ahmedabad (Gujarat), Wellington (Tamil Nadu) & Shillong (Meghalaya) to commemorate the Sikh Regiment's Srinagar landings.
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3. India - Sweden Innovation Day (9th Edition)

Syllabus - GS 2, Bilateral agreements involving India and/or affecting India's interests.

Prelims - 9th edition of India-Sweden Innovation Day.

Context - Dr Jitendra Singh, the Union Minister for Science and Technology, addressed the 9th edition of India-Sweden innovation Day via virtual mode.

Details -

- Dr Singh laid emphasis on collaborative research and joint startups ecosystem that will lead to a shared future by harnessing the power of science, technology and innovation for social good.
- In 2020, the Department of Biotechnology (DBT), GoI and Vinnova, the Swedish Government Agency for Innovation Systems announced grant funding to implement projects aimed at producing new solutions which, aided by [artificial intelligence \(AI\)](#), have significant potential to improve public health.
- In 2019, India and Sweden announced the India-Sweden Collaborative Industrial Research & Development Programme.
 - The joint programme brings together the world-class excellence of Sweden and India to address challenges in the area of Smart Cities and Clean Technologies and Digitalization/[Internet of Things \(IoT\)](#).
- In 2018, during the visit of PM Shri Narendra Modi to Sweden, India agreed to deepen the relationship between the two countries through the Joint Declaration on Innovation Partnership for a Sustainable Future. The India-Sweden Innovation Partnership bridges institutions, R&D-intensive industries and creative entrepreneurs to address global challenges in line with the [UN Sustainable Development Goals](#).
- Today, India is at 3rd position globally with respect to the number of publications. The growth rate of India's publications in SCI (Science Citation Index) journals is around 14% as against the global average of 4%. Also, India is at position 10 in terms of patents filed.