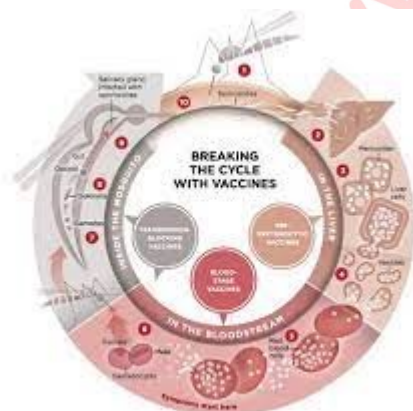


OPEN API



- Since Covid-19 inoculation exercise commenced for the 18-44 age group, finding an available slot at a vaccine centre has become a challenge, especially given that it is mandatory for this age group to make an appointment on the CoWin app.
- With an aim to resolve this, the National Health Authority (NHA) — the nodal agency managing the CoWin app — has opened up the APIs for vaccine appointments to the public.
- An open API refers to a publicly available application programming interface (API) that provides developers access to a proprietary software application. For instance, you have a Google Maps API that integrates with food delivery or travel portal, or the UPI API used by a range of apps to enable easy payments.
- In this case, the NHA has allowed anyone to access a set of requirements needed to communicate and interact with the CoWin platform.
- This has enabled developers to build third-party tools that allow users to set alerts for slot availabilities according to various parameters.
- People can use these third-party tools to enter their details and they will get an alert whenever a slot opens up.

RTS, S



- A malaria vaccine candidate has shown promise in phase 2b clinical trials, with high efficacy at 77%.
- The results of the trial were published recently in preprints with The Lancet.
- The new vaccine candidate, called R21/Matrix M, is a modified version of RTS, S — another candidate against malaria that has been in development for more than 30 years by Walter Reed Institute of Research, GlaxoSmithKline and Bill and Melinda Gates Foundation with the PATH Malaria Vaccine Initiative.
- This vaccine is designed to stop the Plasmodium falciparum malaria parasite from entering the liver and preventing the subsequent deadly blood stages. It targets the liver stage protein of the Plasmodium falciparum life cycle.
- Thirty years in the making, RTS,S is the first, and to date the only, vaccine to reduce malaria in children. But it is not highly efficacious.

The new version

- R21/Matrix M has been developed by scientists at University of Oxford, the same location where the AstraZeneca Covid-19 vaccine was developed.
- They' have been working on this version for almost 6-7 years now.
- This vaccine was produced in the Serum Institute of India.

PRODUCTION LINKED INCENTIVE SCHEME FOR FOOD PROCESSING INDUSTRY (PLISFPI)



- The Ministry of Food Processing Industries (MoFPI) has issued detailed operational scheme guidelines and has launched an online portal for 'Production Linked Incentive Scheme for Food Processing Industry' (PLISFPI).
- As a part of Prime Minister's announcement of Aatmanirbhar Bharat Abhiyan, Government of India has approved a new Central Sector Scheme namely 'Production Linked Incentive Scheme for Food Processing Industry' for implementation during 2021-22 to 2026-27 with an outlay of Rs. 10,900 crore.
- Its objective is to support creation of global food manufacturing champions commensurate with India's natural resource endowment and support Indian brands of food products in the international markets.

Ministry of Food Processing Industries is inviting applications for availing sales based incentives and grants for undertaking Branding & Marketing activities abroad under the scheme from three categories of Applicants:

- ⇒ Category-I: Applicants are large entities who apply for Incentive based on Sales and Investment Criteria. Applicant under this category could undertake Branding & Marketing activities abroad also and apply for grant under the scheme with a common application.
- ⇒ Category-II: SMEs Applicants manufacturing innovative/ organic products who apply for PLI Incentive based on Sales.
- ⇒ Category-III: Applicants applying solely for grant for undertaking Branding & Marketing activities abroad.

INTEGRATED GOODS AND SERVICES TAX (IGST)



- Centre has waived off IGST on the import of COVID related medical supplies including Remdesivir Injection/API, Medical Oxygen, O2 Concentrators, Cryogenic tanks & COVID Vaccines among others.
- The exemption has been granted till 30th June for free distribution of these medical supplies. Earlier the Centre had waived the import duty & health cess on such medical supplies.

- IGST meaning Integrated Goods and Service Tax, is one of the three categories under Goods and Service Tax (CGST, IGST and SGST) with a concept of one tax one nation.
- IGST falls under Integrated Goods and Service Tax Act 2016.
- IGST is charged when movement of goods and services from one state to another. For example, if goods are moved from Tamil Nadu to Kerala, IGST is levied on such goods.
- The revenue out of IGST is shared by state government and central government as per the rates fixed by the authorities.
- Under Article 269A of the Constitution,
- The GST on supplies in the course of interState trade shall be levied and collected by the Government of India and
- such tax shall be apportioned between the Union and the States according to the provisions of law on the recommendations of the Goods and Services Tax Council.
- Under the IGST scheme, 50% of the collections will go to the Centre (as the Central Goods and Services Tax component) and the remaining 50% will be allocated to the States and Union Territories (as the State Goods and Services Tax component).
- And, 42% of the CGST will be devolved to the States and Union Territories.

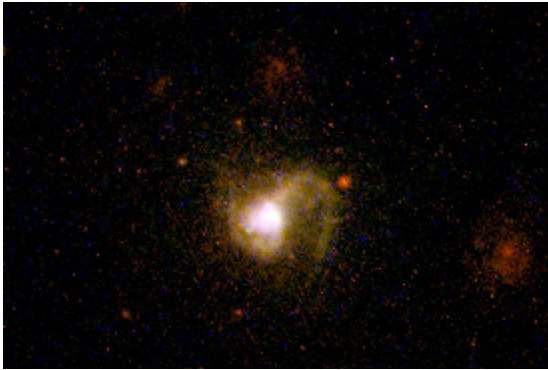
NON-BASMATI RICE EXPORTS



- First consignment of non-basmati rice exports from Paradip port, Odisha flagged off to Vietnam.
- In a major boost to India's rice exports potential especially from eastern region, a consignment has been officially flagged off today from the Paradip International Cargo Terminal (PICT), Odisha to Vietnam.
- This is the first time in the history of Paradip Port, non-basmati rice will be exported.
- Sarala foods group will ship 20 containers of rice on Tuesday followed by around 500 containers over the next three months from PICT to Vietnam.

- A consignment of one of the Agricultural and Processed Food Products Exports Development Authority (APEDA)'s member exporter M/s Sarala Food will be shipped to Hai Phong port, Vietnam.
- Non-basmati rice exports to African and Asian countries are undertaken from various ports of India such as Kakinada, Vishakhapatnam, Chennai, Mundra and Krishnapatnam. Paradip will soon emerge as one of the major rice-exporting port of the country.

Pox 186



- Astrophysicists using the Gemini telescope have spotted the first 'blow-away' galaxy, in which the hydrogen clouds have been stripped off exposing high-energy light.
- This finding could give a clue to solving the puzzle of the reionisation of the universe.
- The galaxy, named Pox 186, is so small that it could fit inside the Milky Way.
- The researchers suspect that its compact size, coupled with its large population of stars -- which amount to a hundred thousand times the mass of the sun -- made the blow-away possible.

Gemini Observatory

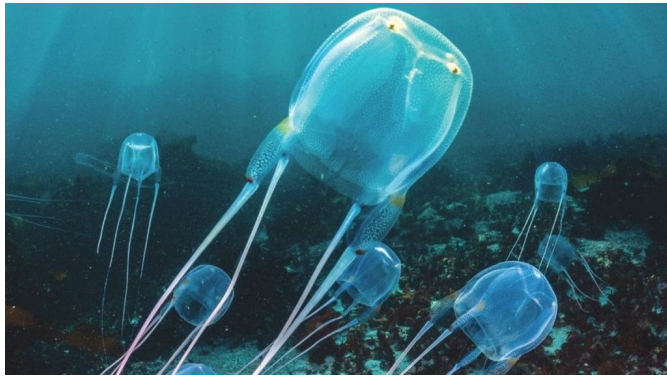
- The Gemini Observatory is an astronomical observatory consisting of two 8.1-metre telescopes, Gemini North and Gemini South, which are located at two separate sites in Hawaii and Chile, respectively.
- The twin Gemini telescopes provide almost complete coverage of both the northern and southern skies
- They are currently among the largest and most advanced optical/infrared telescopes available to astronomers.

US approves major solar energy project in California desert



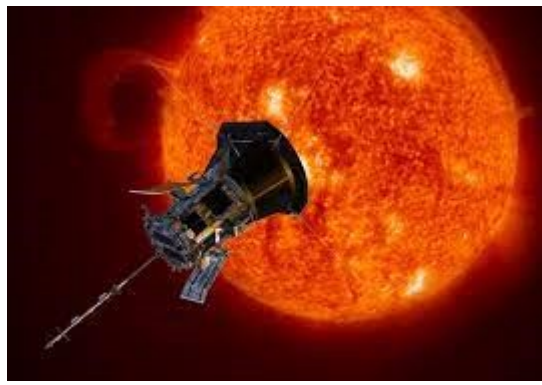
- The US government has approved a major solar energy project in the California desert that will be capable of powering nearly 90,000 homes.
- The Interior Department said in a statement yesterday, that 550 million dollar Crimson Solar Project will be sited on 2,000 acres of federal land west of Blythe, California.
- The announcement comes as President Joe Biden has vowed to expand development of renewable energy projects on public lands as part of a broader agenda to fight climate change, create jobs .
- The project will include a battery storage system and will be sited on land designated for renewable energy development by the Desert Renewable Energy Conservation Plan.

Jellyfish invasion of Vembanad hits fishing



- The presence of the marine species has been reported from many parts of Vembanad lake. Jellyfish, which is a passive swimmer, flows along with the current.
- They get entangled in stake nets, making fishery impossible during the infestation period, complain fishers.
- It is during the peak summer months that jellyfish moves from the sea to freshwater bodies. They usually settle down on the ocean floor and coral and rock structures.
- They also get attached to sea walls and groynes that are laid in the sea for preventing sea erosion.
- As the salinity and temperature of freshwater bodies spike during the peak summer months, they leave the ocean floors to inland waterbodies
- Climate change, pollution, and turbidity can trigger jellyfish bloom, as they have the capacity to outlive extreme conditions.
- They may survive in inland waterbodies during the pre-monsoon period and perish during the monsoon when water temperature and salinity drop with the influx of fresh water.
- The bloom subsides during monsoon, explained researchers.
- Experts have identified the species present in the Kochi estuary area as belonging to the genus *Acromitus*, which is a relatively harmless one.
- However, *Chrysaora*, its cousin, which is known in local parlance as Theechori, could cause health hazards if one comes into contact with it.
- The *Chrysaora* species could cause severe itching and other discomfort and in some cases, medical support may be needed, warned researchers.
- *Crambionella Orsini*, another variety of jellyfish, is harvested in large quantities by trawlers of Kollam, Kanyakumari, and Thoothukudi during November to be exported to South Asian countries.
- The tentacles of the species are used for export, while the bell-like structure of its body is discarded.

Parker Solar Probe



- During a brief swing by Venus, NASA's Parker Solar Probe detected a natural radio signal that revealed the spacecraft had flown through the planet's upper atmosphere.
- This was the first direct measurement of the Venusian atmosphere in nearly 30 years.
- Like Earth, Venus sports an electrically charged layer of gas at the top
- This discovery confirms that Venus' upper atmosphere undergoes puzzling changes over a solar cycle, the Sun's 11-year activity cycle.
- This marks the latest clue to untangling how and why Venus and Earth are so different.

United Nations High Commissioner for Refugees (UNHCR)



- The High Court of Manipur has allowed seven Myanmar nationals, who entered India secretly following the February military coup, to travel to New Delhi to seek protection from the United Nations High Commissioner for Refugees (UNHCR).
- Though India is not a party to the UN Refugee Conventions, the country is a party to the Universal Declaration of Human Rights of 1948 and the International Covenant on Civil and Political Rights of 1966.
- The far-reaching and myriad protection afforded by Article 21 of our Constitution, as interpreted and adumbrated by our Supreme Court time and again, would indubitably encompass the right of non-refoulement.

What is Non-refoulement?

- It is the principle under international law that a person fleeing from persecution from his own country should not be forced to return.

United Nations High Commissioner for Refugees (UNHCR):

- It is a UN Refugee Agency and a global organization dedicated to saving lives, protecting the rights and building a better future for refugees, forcibly displaced communities and stateless people.
- It was created in 1950 to help millions of Europeans who had fled or lost their homes.
- It is headquartered at Geneva, Switzerland.

The Democratic Republic of the Congo (DRC) has officially declared the end of the 12th Ebola outbreak.



- Since the outbreak declared on February 7, 2021, a total of 12 cases have been reported.
- Thanks to the experience of the DRC's response team and health partners, the epidemic has been brought under control in less than three months after its declaration.
- Ebola virus disease (EVD), formerly known as Ebola haemorrhagic fever, is a severe, often fatal illness in humans.
- The virus is transmitted to people from wild animals and spreads in the human population through human-to-human transmission.
- The average EVD case fatality rate is around 50%. Case fatality rates have varied from 25% to 90% in past outbreaks.
- Community engagement is key to successfully controlling outbreaks. Good outbreak control relies on case management, surveillance and contact tracing, a good laboratory service and social mobilisation.
- Early supportive care with rehydration, symptomatic treatment improves survival.
- There is yet no licensed treatment proven to neutralise the virus but a range of blood, immunological and drug therapies are under development.

Why did SpaceX Crew-1 astronauts land in the dark after 167-day mission?



- Elon Musk-led SpaceX safely returned with four astronauts from International Space Station after a 167-day mission on Sunday in a rare night splashdown.
- NASA said consistently calm nighttime weather at the splashdown site and ample moonlight made landing in the dark advantageous.
- Another advantage of landing in dark is avoiding disturbance from private boats, a safety risk.

Asiatic lions test COVID-19 +ve for first time in India as 8 infected in Hyderabad



- Coronavirus has been detected in Asiatic lions in India for the first time as eight lions housed at Nehru Zoological Park in Hyderabad tested positive for the virus.
- "They've been isolated and are responding well to treatment, behaving and eating normally," the Ministry of Environment, Forest and Climate Change said. It added that the zoo has been closed to visitors.

Oktoberfest



- Germany's Oktoberfest, the world's largest beer festival, has been cancelled for the second consecutive year
- held annually in Munich, Bavaria, Germany.
- It is a 16 to 18 day folk festival running from mid- or late September to the first Sunday in October, with more than six million people from around the world attending the event every year.

Nozzles that save 90% water during hand wash launched: IIT Madras



- IIT Madras-incubated startup EarthFokus has launched new water-saving tap nozzles, Ecomist Umbrella and Quamist360, that can save 90% water during hand wash, the institute said.
- The Ecomist Umbrella saves less water than its predecessor but works even with low water pressure.
- The Quamist 360 has an adjustable setting that allows users to turn the nozzle at a 360° angle.

5G TECHNOLOGY AND SPECTRUM TRIALS



- The Department of Telecommunications (DoT), Government of India approved permissions to Telecom Service Providers (TSPs) for conducting trials for use and applications of 5G technology.
- The applicant TSPs include Bharti Airtel Ltd., Reliance JioInfocomm Ltd., Vodafone Idea Ltd. and MTNL. The duration of the trials, at present, is for a period of 6 months.
- Each TSP will have to conduct trials in rural and semi-urban settings also in addition to urban settings so that the benefit of 5G Technology proliferates across the country and is not confined only to urban areas.
- The objectives of conducting 5G trials include testing 5G spectrum propagation characteristics especially in the Indian context; model tuning and evaluation of chosen equipment and vendors; testing of indigenous technology; testing of applications; and to test 5G phones and devices.
- 5G technology is expected to deliver improved user experience in terms of data download rates (expected to be 10 times that of 4G), up to three times greater spectrum efficiency, and ultra low latency to enable Industry 4.0.

MOORHEN YOGA MAT



- A biodegradable and compostable yoga mat developed from water hyacinth by six young girls from the fishing community in Assam could turn this water plant from a nuisance to wealth.
- The mat called 'Moorhen Yoga Mat' will soon be introduced to the world market as a unique product.
- The intervention was triggered through an initiative by North East Centre for Technology Application and Reach (NECTAR), an autonomous body under Department of Science & Technology (DST) to involve the entire women community associated with a collective called 'Simang' meaning dream, led by the 6 girls to create wealth from water hyacinth plants.

Deepor Beel

- The girls belong to the fishing community living in the fringe of the Deepor Beel, a permanent freshwater lake in south west of Guwahati city, recognised as a Ramsar Site (a wetland of international importance) and a bird wildlife sanctuary.
- The lake has been a source of livelihood for 9 villages of the fishing community who shared this biome for centuries, but over the years suffered from excessive growth and accumulation of water hyacinth.

The first supply of UCO (Used Cooking Oil) based Biodiesel blended Diesel



- Union Minister of Petroleum & Natural Gas flagged off the first supply of UCO (Used Cooking Oil) based Biodiesel blended Diesel under the EOI Scheme from Indian Oil's Tikrikalan Terminal, Delhi.
- To create an eco-system for collection and conversion of UCO into Biodiesel, Minister of Petroleum and Natural Gas had initiated Expressions of Interest for "Procurement of Bio-diesel produced from Used Cooking Oil" on the occasion of World Biofuel Day on 10th August 2019.
- Under this initiative, OMCs offer periodically incremental price guarantees for five years and extend off-take guarantees for ten years to prospective entrepreneurs.
- Under this initiative, IndianOil has received 51KL of UCO-Biodiesel at its Tikrikalan terminal in Delhi as of 31.3.2021.
- It is a landmark in India's pursuance of Biofuels which will have a positive impact on the environment.
- Biodiesel is an alternative fuel, similar to conventional or 'fossil' diesel.
- It can be produced from vegetable oils, animal fats, tallow and waste cooking oil.
- A significant advantage of Biodiesel is its carbon-neutrality, i.e. the oilseed absorbs the same amount of CO₂ as is released when the fuel is combusted in a vehicle.
- Also, Biodiesel is rapidly biodegradable and completely non-toxic.

SVAMITVA



- Union Minister for Panchayati Raj Shri Narendra Singh Tomar released the new framework for implementation of the SVAMITVA Scheme to mark the nationwide roll-out of the SVAMITVA Scheme.
- The SVAMITVA Framework is developed by the Ministry of Panchayati Raj.
- It provides a detailed roadmap and guidelines for the various States in terms of the Scheme objectives, coverage, various components involved, year-wise funding pattern, survey approach and methodology, stakeholders involved and their roles and responsibility, monitoring and evaluation, and deliverables.

- SVAMITVA, a Central Sector Scheme of the Ministry of Panchayati Raj was nationally launched by the Prime Minister on the occasion of National Panchayati Raj Day on 24th April 2021 after successful completion of the pilot phase of the Scheme in 9 States.
- SVAMITVA Scheme aims to provide property rights to the residents of rural inhabited areas in India by using Drone survey and CORS Networks which provides mapping accuracy of 5 cms.
- The Ministry of Panchayati Raj (MoPR) is the Nodal Ministry for implementation of the SVAMITVA scheme.
- In the States, the Revenue Department/Land Records Department will be the Nodal Department and shall carry out the scheme with the support of State Panchayati Raj Departments.

CCMB-LaCONES



- Based on reports by CCMB-LaCONES, it has now been confirmed that eight Asiatic lions housed in Nehru Zoological Park (NZP), Hyderabad have tested positive for SARS-CoV2 virus.
- LaCONES or Laboratory for the Conservation of Endangered Species, is a Council of Scientific and Industrial Research lab located in Hyderabad.
- It is a part of CCMB (centre for cellular and molecular biology).
- It was conceptualised by Lalji Singh.
- It is India's only research facility engaged in conservation and preservation of wildlife and its resources.
- This lab would strive to: "To promote excellence in conservation biotechnology and serve for conservation of endangered wildlife in India".
- It was established in 1998 with the help of Central Zoo Authority of India, CSIR and the government of Andhra Pradesh.
- It was dedicated to the nation in 2007 by then President of India APJ Abdul Kalam.

PRODUCTION LINKED INCENTIVE SCHEME (PLI) FOR IT HARDWARE

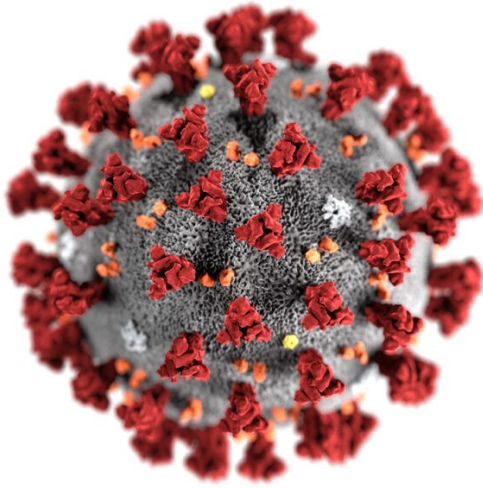


- A total of 19 companies have filed their application under the Production Linked Incentive Scheme (PLI) for IT Hardware.
- Production Linked Incentive Scheme (PLI) for IT Hardware was notified on 03.03.2021.
- The PLI Scheme extends an incentive of 4% to 2%/ 1% on net incremental sales (over base year of FY 2019-20) of goods under target segments that are manufactured in India to eligible companies, for a period of four years (FY 2021-22 to FY 2024-25).
- The target IT hardware segments under the proposed Scheme include Laptops, Tablets, All-in-One Personal Computers (PCs) and Servers.
- The scheme proposes production linked incentives to boost domestic manufacturing and attract large investments in the value chain of these IT Hardware products.

Benefits:

- Over the next 4 years, the Scheme is expected to lead to total production of about INR 1,60,000 crore. Out of the total production, IT Hardware companies have proposed a production of over INR 1,35,000 crore, and Domestic Companies have proposed a production of over INR 25,000 crore.
- The scheme is expected to promote exports significantly. Out of the total production of INR 1,60,000 crore in the next 4 years, more than 37% will be contributed by exports of the order of INR 60,000 crore.
- The scheme will bring additional investment in electronics manufacturing to the tune of INR 2,350 crore.
- The scheme will generate approximately 37,500 direct employment opportunities in next 4 years along with creation of additional indirect employment of nearly 3 times the direct employment.
- Domestic Value Addition is expected to grow from the current 5-12% to 16-35%.

VINCOV-19



- The CSIR- Centre for Cellular and Molecular Biology has developed, possibly the first specific drug for COVID-19 treatment, which contain therapeutic antibodies.
- The Drug Controller General of India (DGCI) has given its approval for human trials, Phase-I and Phase-II for the VINCOV-19 and expected to be tried next week in Delhi and Rajasthan.
- Developed by the CCMB, University of Hyderabad and Vins Bioproduct ltd combine, the VINCOV-19 is a collection of antibodies from Horses after they got injected inactivated Corona virus.
- The approval for its emergency use by the India's Drug Regulator is expected once the results of phase I and II declared.
- VINCOV may be the first specific drug for COVID treatment and it works best when given on early stage of infection.

PMGKAY-III



- 28 States/ UTs start lifting food grains from Food Corporation of India depots for distribution under PMGKAY-III.
- The Department of Food & Public Distribution has started implementation of Pradhan Mantri Garib Kalyan Anna Yojana (PMGKAY) for a period of 2 months i.e. May and June 2021 to ameliorate the hardships faced by the poor and needy due to various disruptions caused by the resurgence of COVID-19 in the country.
- The Government of India will bear the entire cost on implementation of PMGKAY (May-June 2021) scheme, without any sharing by States/UTs.
- Under this special scheme, about 80 Crore NFSA beneficiaries covered under both categories of NFSA, namely Antyodaya Anna Yojana (AAY) and Priority Households (PHH), are being provided with an additional quota of free-of-cost foodgrains (Rice/ Wheat) at a scale of 5 Kg per person per month, over and above their regular monthly entitlements.

COMMON YOGA PROTOCOL (CYP)



- The Common Yoga Protocol (CYP) lies at the heart of International Day of Yoga (IDY) 2021 observation.
- The Common Yoga Protocol (CYP) is a specified sequence of Yogasanas of 45 minutes duration.
- It was developed by some of the most accomplished Yoga gurus of India in 2015.
- It was designed for easy learning by common people, irrespective of their age and gender, and can be learnt through simple training sessions and online classes.
- The Common Yoga Protocol (CYP) is one of the best introductory programmes for beginners to learn Yoga.

Kachin people



- They are a confederation of ethnic groups who inhabit the Kachin Hills in northern Myanmar's Kachin State and neighbouring Yunnan Province, China, and Arunachal Pradesh, Assam in Northeastern India.
- The term Kachin people is often used interchangeably with the main subset, called the Jingpo people in China.

IIT-M, UK researchers develop paper-based sensor to detect Anti Microbial Resistance (AMR)



- IIT-Madras and UK researchers have developed a paper-based sensor that can detect antimicrobial pollutants, which induce antimicrobial resistance in water bodies.
- The sensor is based on a "see and tell" mechanism that makes it "logistically effective for wide implementation".
- The practical applications of these sensors include food safety analysis and environmental and health care monitoring.

Indian Army today inaugurated the first green solar energy harnessing plant



- Indian Army today inaugurated the first green solar energy harnessing plant of 56 kilovolt-ampere(kVA), using vanadium-based battery technology in North Sikkim, at an altitude of 16,000 feet, the Army informed.
- The project was completed in collaboration with IIT, Mumbai. A team from the institute led by Professor Prakash Ghosh and troops of the Indian Army completed the project braving extreme climatic conditions.
- The environment friendly project will benefit troops in forward areas.

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